

Amateur
Photographer

**RAISING YOUR PHOTOGRAPHY
TO THE NEXT LEVEL**

SPRING 2016

ADVANCED PHOTOGRAPHY SKILLS

Black & White Special

- ✓ Get perfect B&W exposures
- ✓ Shoot stunning landscapes
- ✓ Learn which filters to use and when



COLOUR TONING

Using tints to add impact to B&W

DARKROOM ESSENTIALS

Developing and printing B&W film

MAKE A PORTFOLIO

Create a book to show off your prints

B&W PORTRAITS

Pro tips for lighting mono portraits

PLUS MAKE EXHIBITION QUALITY B&W PRINTS + USE CAMERA RAW

THE **COLLECTION** THAT KNOWS ITS WAY AROUND THE WORLD

NEW!

HORSESHOE BEND
PAGE, ARIZONA

© Keith Briley

BUILT FOR **PHOTOGRAPHERS**. DESIGNED FOR **TRAVEL**.

With an emphasis on lightweight, durable construction and slim silhouettes, **The VEO Collection** of bags, tripods and monopods is tailor-made for travel photographers.



VEO FEATURES

- ✓ Patented Rapid Column Rotation for quick setup and compact transportation.
- ✓ Adjustable tension leg locks with convertible rubber/spike feet.
- ✓ Three different leg angles allow for greater versatility.
- ✓ Dual purpose camera bags with removable inserts and innovative VEO tripod carrying system.

THE
VEO
COLLECTION
TRIPODS | MONOPODS | BAGS

Available at Authorized Vanguard Dealers



Welcome

At first glance black and white may seem like the simplest type of photography. With no colour information, images are broken down to a series of greyscale shapes. This allows the viewer to really concentrate on the construction and subjects of the image. But it really isn't as easy as it seems.

We see in colour, whether it is with our eyes or through the camera's viewfinder. And we have to try to translate what our eyes see into something that will look good in monochrome. Thankfully these days we have digital technology, which makes it much easier than when shooting on film. We are now able to see how a shot will look in black and white before we even take it. There is no waiting to develop a film and make a print. We can decide which coloured filter effects to use, and even the level of contrast we wish to apply, all without

even needing to use a computer.

However, as much as this may seem easier, there is still a lot of information to take in and learn. And what do you do if you have shot an image in colour and then want to convert it to black and white when editing it?

In this issue we will walk you through the process of shooting black and white images, from deciding whether a shot will work or not, to shooting landscapes, portraits and street photos, and finally how to edit and print your images. And if you want to shoot on film and develop and print your photos, then we have a guide to getting started doing that too, with a list of the black and white films that are currently available.

Hopefully you will be inspired by the advice our contributors provide in this issue to go out and take some fantastic black and white images of your own.

RICHARD SIBLEY, EDITOR

The Team

EDITOR: Richard Sibley

ART EDITOR: Simon Warren

PRODUCTION EDITOR: Jacqueline Porter

PUBLISHING DIRECTOR: Alex Robb

SENIOR MARKETING MANAGER:

Samantha Blakey

ONLINE MANAGER: Karen Sheard

ADVERTISING: Simon Gerard

CONTRIBUTORS: Richard Sibley, Phil Hall, Tim Coleman, Andy Westlake, Jon Devo, Callum McInerney-Riley, Russ Barnes, Billy Currie, Damien Lovegrove, Lee Frost, Ian Bramham, Martin Evening, Michael Freeman, Steven Taylor, Andrew Sanderson, Michael Topham, Rupert Vandervell, Antonio Olmos, Jerry Webb. *Main cover image and image above by Richard Sibley*

ADVANCED
PHOTOGRAPHY SKILLS

Amateur Photographer™ is a trademark of Time Inc. (UK) Ltd
© 2016 Time Inc. (UK) Ltd ISSN No. 0002-6840

Advanced Photography Skills is a Focus Network title, published by Time Inc. (UK) Ltd, Blue Fin Building, 110 Southwark Street, London SE10SU

Time Inc.

recycle
Please do not throw away
this magazine please recycle it.

Contents

6 WHY SHOOT BLACK & WHITE
How do you decide whether to convert a shot to mono?

12 EXPOSURE AND METERING
Exposure is critical – here's how to get it right

16 IN-CAMERA BLACK & WHITE
We explore the options for shooting quality mono images straight from camera – no Photoshop required

22 FILTERS FOR BLACK & WHITE
We show you which filters are still essential

26 CONVERTING YOUR DSLR
Converting your DSLR to shoot black & white only

28 ADVANCED CONVERSION
For stunning mono images, you need to take control

30 TONING YOUR MONO IMAGES
Enhance your mono images by adding a duotone

32 CONVERSIONS IN CAMERA RAW
Shooting in raw mode means you can be as creative as you could in the darkroom

36 MONO AND MOODY
Why shooting in mono allows you to evoke much more of an emotional response in the viewer

44 INFRARED
Giving infrared photography a try can open the door to creating captivating images

51 HDR AND EXPOSURE BLENDING
A photographer's worst enemy is often contrast, but using HDR is a great solution

55 CREATIVE LIGHTING
Creating high-key and low-key portraits

58 HOLLYWOOD GLAMOUR
Recreate the golden age of Hollywood with our lighting guide

64 ARCHITECTURE
A top pro reveals his secrets

71 STREET PHOTOGRAPHY
Tips from top street photographers

80 BUILD A HOME DARKROOM
How to create your own darkroom and make prints

84 RETURN TO FILM
Advice on going back to basics using film

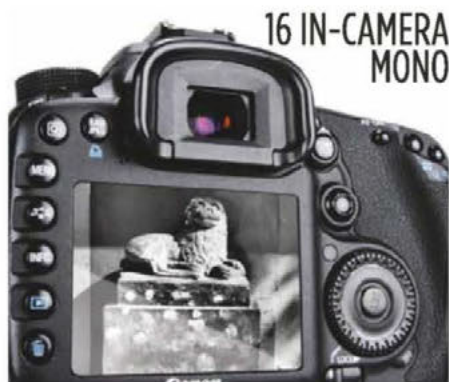
87 B&W NEGATIVE FILMS
We guide you on which film to choose

88 PROCESSING FILM
We show how easy it is to process your own negs

92 PRINT LEGACY
Tips for creating a bound portfolio

96 PERFECT PRINTS AT HOME
Nothing beats the tactile quality of a print.
We show you how to get the best out of your printer





16 IN-CAMERA
MONO



30 TONING



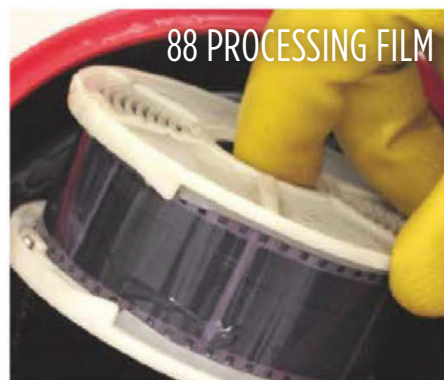
32 MONO CONVERSIONS
IN CAMERA RAW



44 INFRARED



55 LIGHTING



88 PROCESSING FILM



Why black and white?

Deciding whether or not to convert a shot to black & white can take almost as much time as actually shooting. **Michael Freeman** offers some advice on how to develop a keen eye for monochrome

Black & white photography continues to become more and more interesting creatively, ever since its invention in 1935. You might disagree with the date, but surely not with the sentiment – that there's a huge creative choice between shooting in colour and in black & white; hence the importance of 1935 and the invention of Kodachrome, otherwise known as the first integral tri-pack film. While the idea of photographing in the medium that we see by – colour – was there from the very start, early processes like Autochrome were impractical curiosities. There wasn't a sensible choice, and a century of shooting had most people on all three sides of the camera (behind, in front and viewing the results) used to doing without colour.

It didn't mean that pre-Kodachrome photographers were colour blind, and using strongly coloured filters when shooting was an important way of translating

colour into tone. But it was only once that colour became easy and possible, and very quickly took over as normal, that the idea of black & white took root. It was something to choose because you wanted to.

With film, the immediate decision was which roll to load in the camera: colour or black & white. That alone prompted some anticipation, often aesthetic but also practically, to do with light levels. Behind this, though, was the deeper personal decision of whether you saw yourself as a black & white photographer. The ethos of pure-and-essential black & white versus crass-and-commonplace colour began to crystallise in the 1960s and '70s.

I mention this because the sense of what black & white stands for still persists. And because colour is so thoroughly normal and, well, default, black & white is more than ever an elective choice. Not only that, but it's a wide-ranging choice.

Depending on how you choose to look at it, the choice lies on a scale between practical and creative, even conceptual for some people. Moreover, you can choose later, and while it's generally a good idea to be deliberate about what you're shooting from the start, you can still change your mind.

But are there general criteria for choosing black & white over colour, or is it just personal?

I think that there are, and the choice still remains personal. Reasons for choosing black & white generally fall into three groups: when there are issues about colour, about graphics and about genre.

First, the colour-related issues, and like most of these decisions you can see it from a problem-solving point of view or as an opportunity to do something extra. In other words, crudely put, it's either 'don't like the colour so let's eliminate it' or 'let's use the colour channels to bring something more out of the shot'.

Horses outside the Zhang Family Ancestral Hall, Heshun, near Tengchong, Yunnan, China

COLOUR



WHEN COLOUR DETRACTS OR DISTRACTS

One of the rewards of thinking in black & white is that it clarifies the role of colour in any scene – does it contribute, or is it taking attention away from the real focus of the shot? Life today is now more garishly colourful than ever, and many of these colours creep unwanted into the frame. Alternatively, taking a more positive attitude, black & white conversion in software may allow you to enhance an important quality in an image. So, the first question to ask, or have in the back of your mind when shooting, is: 'Does colour help what I want from this shot?' If not, the second question is: 'Does the colour take attention away from what I want?' There is then a clear case for taking the black & white option seriously.

KYEE MYINT TAING FISH MARKET, YANGON, 2014

Here, two men are arranged geometrically and caught at a moment of gesture and expression. In colour, the basket commands attention. This alone makes it a natural to convert to black & white, simply to take it back to what the photographer saw. Channel adjustment during conversion gives control over how prominent or not these colours translate into monochrome. The smaller b&w version (far right) shows one inappropriate extreme, with an almost-white red.



ACTION AND EXPRESSION

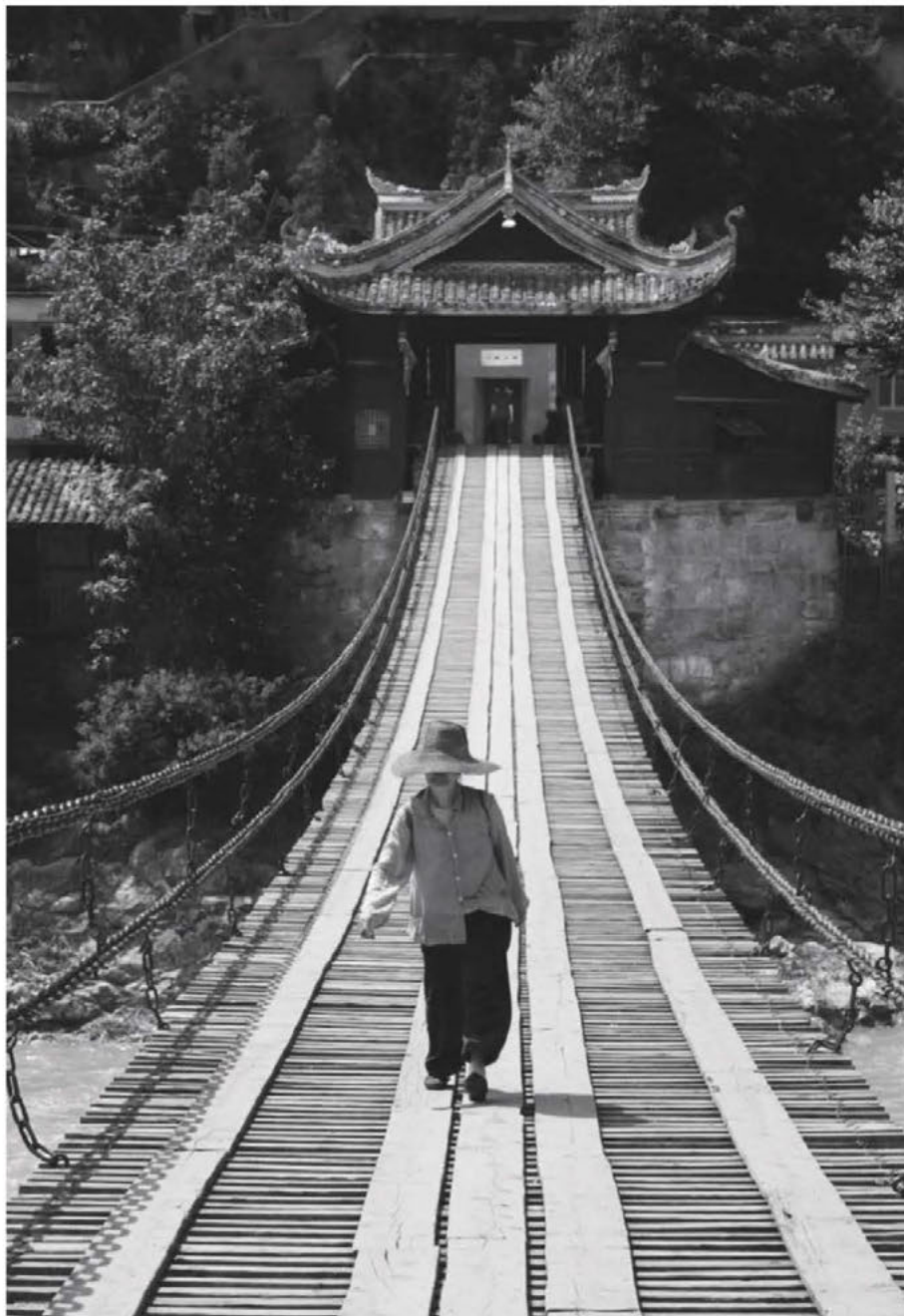
Two components of photography that usually have very little to do with colour are action and expression. If we extend expression to include gesture and posture, and make it all about expressive moments, these are what handheld photography arguably does best. Capturing the moment, whether decisive or any other kind, is a purely photographic quality and yet colour is



typically irrelevant. Try removing the colour and see what effect this has on the viewer's attention. Other things being equal, and provided that colour contrast isn't doing a job of focusing attention, the action caught may seem stronger. As with all the reasons discussed here, of course, this is just a possibility or a likelihood, and it's the specifics of the shot that count.

KYEE MYINT TAING FISH MARKET, YANGON, 2014

Sometimes there is no clear-cut advantage either way. The colour contrast between artificial light and pre-dawn ambient blue plays a strong role in the colour version and draws attention to the faces. Removing colour returns the scene to the subject matter of a fish market, so that the interaction of the two people stands out more because of expression and gesture. So, it's hard to say which image is stronger overall.



**LUDING BRIDGE,
SICHUAN, 2009**

High harsh sunlight and an unappealing palette of washed-out colours were unavoidable in this shot of a historically famous footbridge in China – a shot needed for the assignment. The reason for this was a rare single minute of quiet normality in a place besieged by Chinese tourists, and it had to be shot at this moment. Removing colour and increasing the contrast solved the problem and turned it into a satisfyingly graphic image.



**LESS THAN
IDEAL LIGHTING**

However clichéd ‘golden light’ is as a shooting choice, most people like it. The warm glow is as much a part of light as the low, raking angle of sunlight, and having to do without it causes many people anxiety or dissatisfaction. Black & white suffers very little from this fixation because the ‘golden’ aspect of this light simply doesn’t exist. Imagine that while this is what you’d like for a scene, you’re simply there at midday instead. Visualise the scene in black & white, and you may find that what was harsh and cold in colour becomes strong and graphic in monochrome.

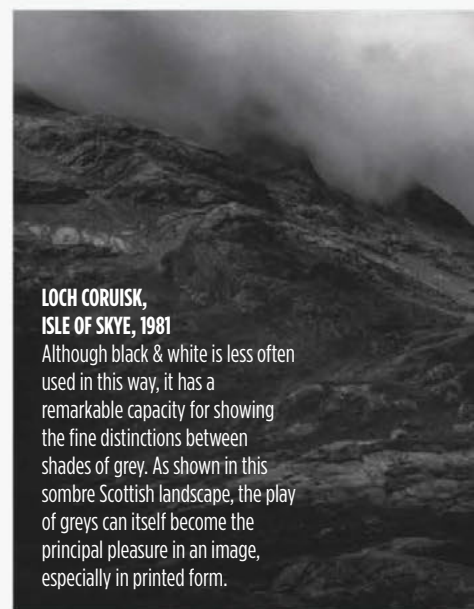
GRAPHICS

FOCUS ON FORMAL QUALITIES

Now let’s look at the graphic issues, in other words, the form of the image rather than the content. When the appeal in shooting lies in the formal visual qualities rather than the subject matter, black & white’s ‘language’ can help keep things concentrated on form, shape, line and texture. There’s a good psychological reason for this. Colour evokes psychological and emotional responses that other image qualities do not, while at the same time, our eye-and-brain’s colour sense is very coarse. So, taking colour out of an image is a huge encouragement to the viewer to concentrate instead on these other, more detailed formal image qualities.

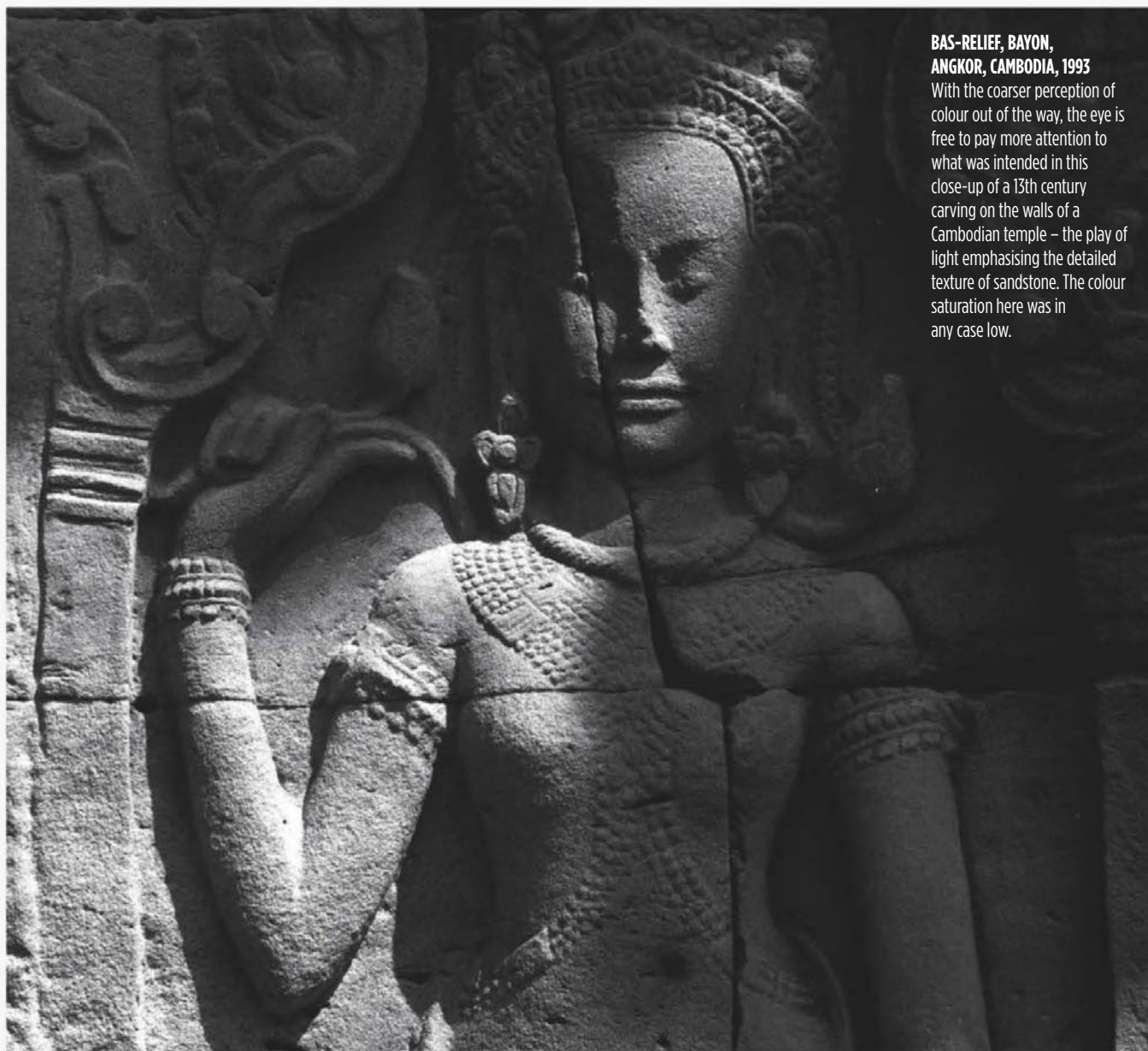
TONAL SUBTLETY

At the other end of the exposure-plus-processing spectrum, black & white also supports the exploration of gentle tonal differences – the subtle range of greys. This has long been the appeal of platinum and palladium printing, but it extends easily into the digital realm. I sense that there’s less of this around these days, with everyone in charge of their own processing and yet tending to follow the formula of closing up the black and white points and optimising the image. The ‘range of greys’ approach to black & white is a creatively interesting one, and it’s all about fine shades of distinction.



**LOCH CORUIK,
ISLE OF SKYE, 1981**

Although black & white is less often used in this way, it has a remarkable capacity for showing the fine distinctions between shades of grey. As shown in this sombre Scottish landscape, the play of greys can itself become the principal pleasure in an image, especially in printed form.



**BAS-RELIEF, BAYON,
ANGKOR, CAMBODIA, 1993**

With the coarser perception of colour out of the way, the eye is free to pay more attention to what was intended in this close-up of a 13th century carving on the walls of a Cambodian temple – the play of light emphasising the detailed texture of sandstone. The colour saturation here was in any case low.





**YAK CARAVAN,
MANIGANGE,
SICHUAN, 2009**

The distinction is subtle here, and depends very much on whether you subscribe to the view that candid, hands-off reportage photography is more apt in black & white because of its history. However, the black & white version is arguably more about people and a way of life than the 'here and now' sense from the colour version.

PHOTO REPORTAGE

Gritty reportage (even the expression conjures up grainy Kodak Tri-X) was a mainstay of editorial photography during the picture magazine era from the 1930s to the 1970s, bolstered by the reputation of photographers shooting for agencies such as Magnum. Black & white is still largely seen as the 'natural' medium for observational, candid, photography, especially for situations that are not about immediate news but which have some sense of the human condition. The legacy of black & white may not be as legitimately 'closer to the truth' as it's often believed to be, but it still has a hold on what many see as pure documentary, destined to last and be part of an archive.



GENRE

On to the third group of choice: genre. Now, there's a lot that's contradictory in black & white photography, not least that there have been in a sense two camps in its history. One of them has been concerned with the excellence of the print and other aesthetic matters, while the other has seen black & white as a no-nonsense 'pure' medium unconcerned with prettiness. Both sides have co-existed through the film era, and there's no reason why they can't continue digitally.

A century and a half of photography has created certain visual conventions, and all the genres have developed their own special history. Among these, two in particular have a rich tradition (though by no means exclusive) of being performed in black & white, namely, photo reportage and landscape (of a certain type). Simply wanting to be a part of that tradition may not be the most subtle reason for shooting in black & white, but it's a very understandable one.



BAOSHAN, MIDDLE YANGTZE RIVER, YUNNAN, 2014

This is an attractive landscape to begin with, in south-west China, although the sun was a little higher than I would have preferred. The colour of the Yangtze River is vivid, although probably unbelievable to many viewers. For both these reasons, I decided to do a high-contrast black & white version, at the same time tweaking the colour channels so as to darken the cyan of the sky, and the result is hard and striking. Just for demonstration, I then applied the same punchy settings from Camera Raw in colour (Contrast +80, Highlights +20, Shadows -30, Whites clipped at +50 and Blacks clipped at -30), and the result (above right) is unacceptably harsh and oversaturated.

TONAL EXTREMES

If colour photography is somehow chained to reality, with everyone expecting a kind of visual accuracy, black & white is freer and more open to interpretation – especially in exposure and processing. Simply put, you can go to tonal extremes more acceptably in black & white. Blocked shadows and pure-white highlights can work perfectly well. As an experiment, take a fairly high-contrast image, and instead of trying to claw back highlight detail and open up the shadows, go the other way with processing: block up the shadows and kill the highlights for even more contrast. But do this on both a colour version and on a black & white version. It's more than likely that the colour shot will look badly exposed/processed, while the black & white will look like a creative choice.



PEACH BLOSSOM ISLAND, YUNNAN, 2010

The tonal strength of this image clearly makes it work, but only a comparison with the colour version shows just how much the image owes to this. The main image was made in an extreme form of black & white, because the camera's sensor had been given an infrared conversion. The infrared image (bottom left) was converted with maximum contrast and the yellow channel lifted considerably.



LANDSCAPE

Grand and yet thoughtful sums up the approach worked out in the early to mid-20th century by the school of western American photographers that included Ansel Adams and Edward Weston. Considered composition and exquisite control of tonal values became hallmarks of a style that, like black & white photo reportage, persists. Part of the attraction of shooting digitally for black & white is that the conversion from an RGB original image to black & white allows you exceptional control over the tonal values of individual colours. With a little care, any colour can be turned into any shade of grey, from black to white. This follows in the tradition of using coloured filters when shooting – a technique very much pioneered by early landscape photographers.

Exposure and metering

‘Expose for the shadows’ was the clarion call of black & white film photographers, and although technology may have changed, says **Lee Frost**, this tried-and-tested technique hasn’t

Photography, whether analogue or digital, is all about exposure. To record a successful image you need to get a precisely controlled amount of light to the film or sensor inside your camera. How much light depends on the subject, the situation and whether or not you’re trying to create a specific effect. A ‘correct’ exposure is subjective, as intentionally giving an image too much or too little exposure may be necessary in one situation but not in another.

It is important to understand how exposure works so you can control it rather than letting it control you. This applies as much today as it ever did, although in this digital age many photographers see exposure as something that can always be fixed later if they get it wrong. To some extent it can, just as a decent black & white print can usually be teased from a negative that has been under- or overexposed. However, getting it right in-camera is always preferable if optimum image quality is your goal, so you should never leave such a crucial factor as exposure to chance.

The traditional approach to exposing black & white negative film was to expose for the shadows – give the image enough exposure so that detail was recorded in the shadow areas. Some photographers took things a step further and followed the Zone System, made famous by legendary photographer Ansel Adams. This involved choosing a key element of the image, deciding which ‘zone’ you wanted it to fall into (in a scale of 0 to 10, with 0 being pure black and 10 pure white), then setting

the exposure accordingly after taking a reflected meter reading from the relevant part of the scene or subject.

Today, armed with a DSLR, getting the exposure ‘correct’ is far quicker and easier. This is because as well as having a sophisticated integral metering system that’s able to provide accurate readings in almost any situation, you also have a preview screen on the back of the camera that shows you exactly what type of image you’ll end up with if you use that exposure. In addition to the preview image, you have the histogram, which is something that’s even more useful when it comes to assessing exposure.

UNDERSTANDING HISTOGRAMS

The histogram is a graph that shows you the distribution of tones in a digital image, from the darkest shadows (on the far left of the histogram) to the brightest highlights (on the far right). You can think of it as a digital Zone System if you like – with extras!

By assessing the shape and distribution of the histogram, you can quickly gauge the exposure. The images on the preview screen of your camera, on the other hand, are affected by the brightness of your surroundings so they may look lighter and darker than they really are, which makes it difficult to assess whether you have got the exposure right and is more likely to result in exposure error.

I have had photographers on workshops ask why their images are still coming out too dark even when they’ve dialled in +2 stops of exposure compensation. Usually the answer is that the camera’s screen brightness is set to ‘auto’ so it adjusts to suit ambient light levels, often making the preview image much lighter or darker than the actual image recorded on the camera’s sensor. Had they checked the histogram instead, they would have been able to see that the exposure was acceptable even if the preview image wasn’t.

Careful metering is necessary for delicate high-key subjects

So what is an acceptable exposure? The basic rule with digital photography is to make sure the tones in an image fall within the extremes of the histogram. If they're pushed over to the left side, this usually indicates underexposure (or an image that comprises mainly dark tones), and if the tone graph actually collides with the far left of the histogram that tells you the shadows have been 'clipped'. In real terms, this means the darker shadow areas will come out black with no details to recover.

At the other extreme, if the tone graph is pushed over to the right side of the histogram, this is usually a sign of overexposure (or an image that comprises mainly light tones, such as a snow scene). If the tone graph collides with the far right of the histogram, that tells you the highlights have been 'clipped' and the brighter highlights will record as white with no detail or tone to recover.

If you make sure that neither the shadows nor the highlights are clipped, you will have an acceptable image to work with. However, in order to achieve optimum image quality you can use the histogram in a more controlled way.

EXPOSURE USING THE HISTOGRAM

'Exposing to the right' is the name of the technique and it involves giving as much exposure as you can to an image without 'clipping' the highlights. This is similar to using the Zone System to determine the correct exposure for a black & white negative. To use 'exposing to the right', you must shoot in raw mode not JPEG, so the images are 12 or 14-bit rather than 8-bit, and are uncompressed so all the data recorded by the sensor is present in the raw files.

The technique is based on the fact that the tonal values recorded by your camera's sensor aren't evenly distributed from the shadows through to the highlights, but are



Deciding how you want the final image to look will help you determine the best exposure

Modern metering systems can cope well with tricky light and high contrast





■ heavily biased towards the right side of the histogram – towards the highlights.

Let’s use the following as an example. The sensor in a digital SLR can record a set number of stops in brightness. We’ll assume it’s 5, for the sake of simplicity. If you look at the histogram for an image on your camera’s preview screen, you may find that it’s divided into five sections of equal width from left to right. If not, imagine it is. Each of those sections represents 1 stop of brightness. However, instead of the tonal values that your camera’s sensor can record being divided equally among those 5 stops, 50% of them are recorded in the brightest stop, half as many in the next stop, half as many again in the next stop, and so on.

Most DSLRs record raw images in 12-bit, and a 12-bit

The exposure was reduced in this image during processing to add drama

KEEP EXPOSURE SIMPLE

Before switching to digital capture, I used a handheld spotmeter and would give myself a headache at times by metering from the highlights, metering from the shadows and trying to work out the optimum exposure. Then the light would change and I’d have to do it all over again!

Thanks to the instant feedback you get from a digital camera – primarily in the form of the histogram – there’s no longer a need to employ complicated metering techniques to establish ‘correct’ exposure because you know when you’ve got it right or wrong and you can make changes on the spot.

These days, I rely entirely on the integral metering system of my Canon EOS-1Ds Mark III, which is almost always set to evaluative metering and aperture priority. If I need to adjust the exposure, I just use exposure compensation. It’s a combination that never fails.

image is capable of recording 4,096 tonal values. These are distributed across the histogram as listed below:

First stop	.....	2,048 tonal values
Second stop	.....	1,024 tonal values
Third stop	.....	512 tonal values
Fourth stop	.....	256 tonal values
Fifth stop	.....	128 tonal values

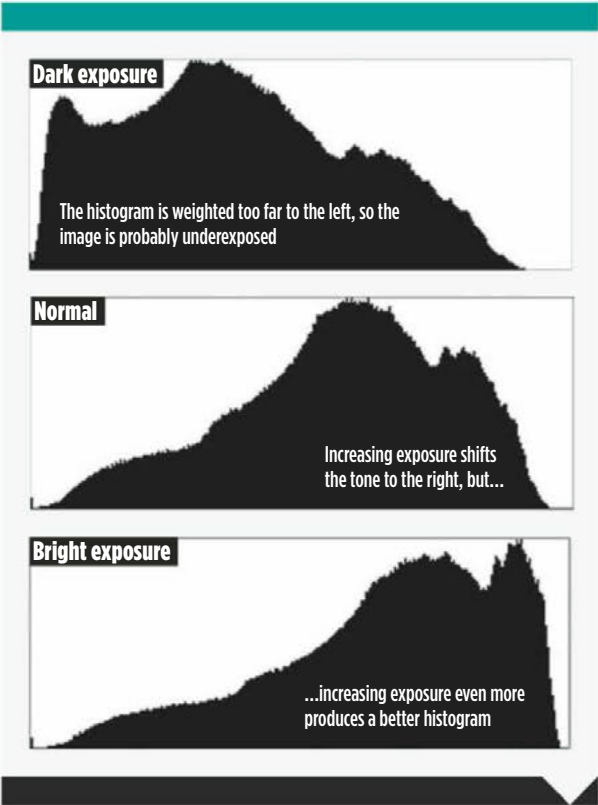
By ‘exposing to the right’ so the histogram extends into the brightest 20% (the first ‘stop’) without clipping the highlights, you’re maximising the number of tonal values in the image so noise and posterisation in the shadow areas are reduced or eliminated. When you look at your camera’s preview screen and when you open the raw file on your computer, the image will usually look overexposed and washed out, but you can adjust the exposure and contrast using the relevant sliders in your raw converter to fix this.

Underexposing is the worst thing for a digital image, as the histogram will be biased to the left side where there are far fewer tonal values. The result will be increased noise when you then lighten the image to correct the exposure.

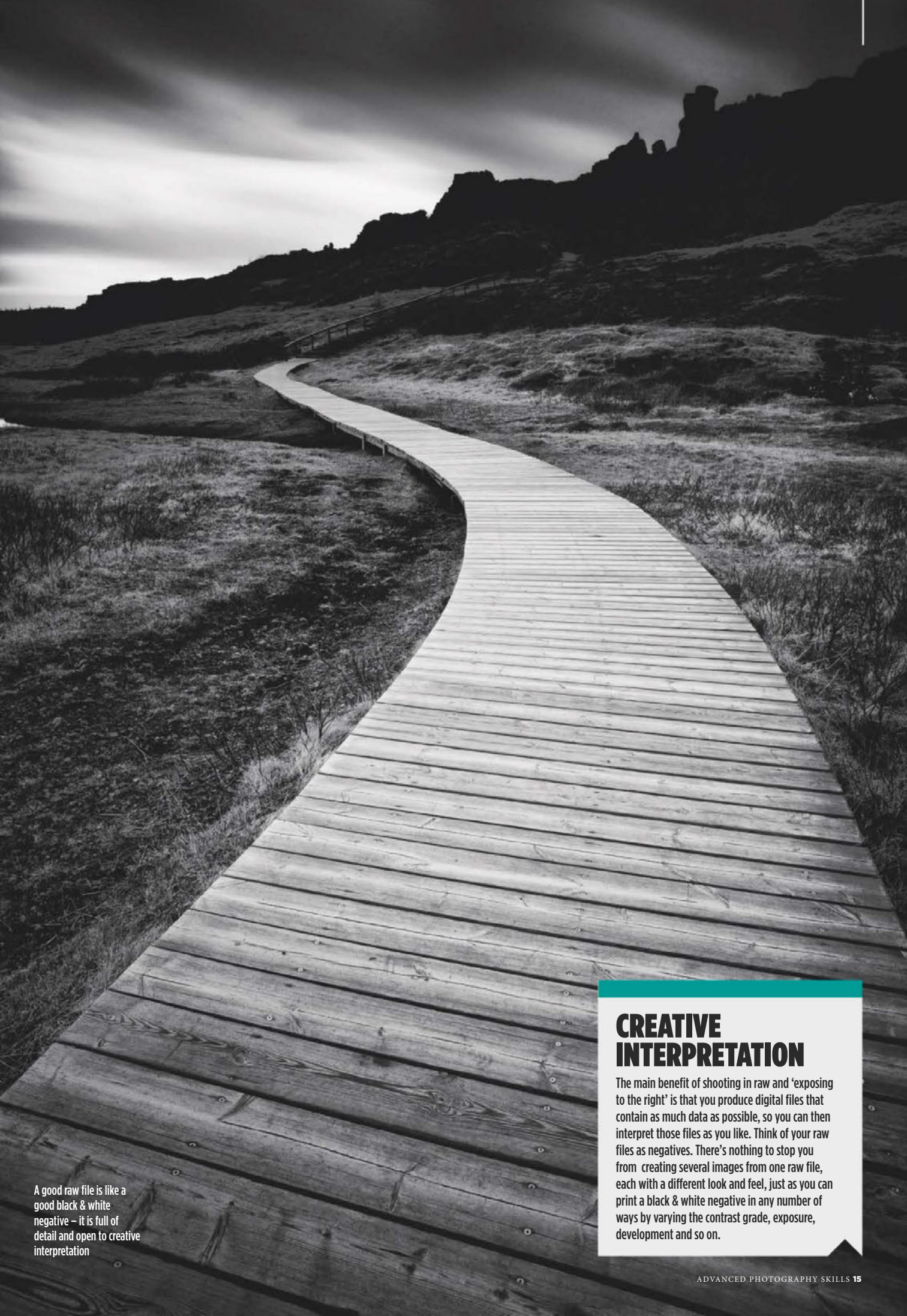
USING EXPOSURE COMPENSATION

Implementing this technique needn’t involve a drastic change in the way you shoot. Just compose the shot as normal, fit any filters to your lens that you intend to use, then take a shot and check the histogram. If the tonal graph is centred, as it would be for a ‘normal’ image, or biased to the left, dial in +1/3 stop using your camera’s exposure compensation facility, take another shot and check the histogram again. You’ll see that the histogram has shifted to the right. If necessary, dial in +2/3 of exposure compensation and shoot again. Repeat until the highlight warning starts to flash on the preview image (which you can enable/disable in your camera’s menu), telling you the highlights have been clipped. Once that happens, you’ve taken the exposure a little too far.

This may seem complicated, but just like exposing for the shadows with black & white film, or using the Zone System, it’s necessary if you want to achieve optimum image quality – and once you get used to ‘exposing to the right’ you’ll be surprised how quick and easy it is.



‘Exposing to the right’ will give you a better raw file to work with by maximising the tonal values recorded by your camera’s sensor



A good raw file is like a good black & white negative – it is full of detail and open to creative interpretation

CREATIVE INTERPRETATION

The main benefit of shooting in raw and 'exposing to the right' is that you produce digital files that contain as much data as possible, so you can then interpret those files as you like. Think of your raw files as negatives. There's nothing to stop you from creating several images from one raw file, each with a different look and feel, just as you can print a black & white negative in any number of ways by varying the contrast grade, exposure, development and so on.



In-camera black & white

If you want to leave Photoshop in the box and shoot top-quality black & white images straight out of the camera, **Andy Westlake** explores the available options

Back in the days of film, shooting monochrome was a very specific choice. You loaded your camera with a roll of black & white film, and for the next 24 or 36 exposures you had no choice but to run with it. Of course, you couldn't see how your pictures were coming out while you were shooting, so you had to try to learn how the colourful world in front of you would translate into greyscale.

If you were really serious about the process, you'd carry around a set of colour lens filters for contrast control. You'd probably also set up your own darkroom for developing and printing your film. Indeed, to get the best results, you'd spend hours under a dim red safelight, dodging and burning your prints.

These days, of course, times have changed. Shooting monochrome on almost any digital camera is as simple as switching colour modes, which you can do on a shot-by-shot basis almost as easily as changing the aperture or ISO. But when you do this, you may well find that the mono output is disappointing and lacking impact.

Chances are you might try it once when you first get the camera, but never again.

Of course, it's also simple to convert your pictures to monochrome in post-processing, with essentially the same control over how the final image will look as you'd get in the darkroom. This means that switching your camera to mono can appear pointless, especially if you shoot raw. Why shoot black & white in-camera when you can do it all later, with more control?

In fact, there are some very good reasons why you might decide to shoot mono in-camera. First, not everyone wants to shoot raw all the time and post-process every shot – it's a time-consuming business. Second, even if you are planning on post-processing your images, there can be real value in using your camera's mono mode to give an initial idea of how well your shots will work out, to help to fine-tune your compositions.

Finally, with the in-camera processing controls that are now available, and some of the more attractive 'filter' modes, it's possible to get attractive results out of the camera with no further manipulation.

What's more, if you shoot monochrome using either a compact camera or a compact system camera that uses electronic viewing, it's possible to see exactly how your pictures will turn out before you press the shutter button. This can be useful, as it helps you ignore the distraction of strong colours when composing your images. You can also see more easily how different processing settings will impact your image. Much the same can be achieved by shooting with a DSLR in live view, as opposed to using the optical viewfinder.

In this article I'll be looking in detail at shooting in monochrome mode, exploring the options available and offering some tips on how to get the best results.

HOW TO SHOOT MONOCHROME ON YOUR DIGITAL CAMERA

Setting your camera to shoot in black & white is usually very straightforward. Simply locate the camera’s colour mode setting, and change the output to monochrome. Different manufacturers call these settings by different names, and some also have several variants of their black & white mode. If in doubt, check your manual (as always).

It’s important to understand that, unlike with film, switching the camera to monochrome is purely a processing setting. The sensor is still recording images with full colour information, and if you record raw files they will still include all of it. It’s just the JPEG output that’s monochrome.

The manufacturer’s own raw-processing software will normally recognise your intention to shoot in mono, and display the images accordingly. However, if you’d rather have a colour version of the shot, it just requires changing the setting back. Third-party processing software will most likely display your files in colour, but will happily process them into black & white.

WHEN TO SHOOT MONO?

One question that beginners often ask is when should they use black & white, rather than colour. The simple answer is ‘whenever you like’ – there are no hard-and-fast rules. However, it’s important to understand that shooting in monochrome is a rather different art to working in colour, as some shots that look great in colour look dull in black & white, and vice versa. Indeed, getting effective results in mono often requires a fair bit of practice.

Shooting monochrome removes the distraction of colour from your photographs, reducing them to the essentials of light and shade. This means it’s naturally better suited to some subjects than others – obviously, if colour is important to an image, such as red flowers against green foliage, then removing it can destroy the picture’s impact. But likewise, when colour distracts from the subject, shooting in mono can be a real improvement.

There are, however, some situations to which monochrome is particularly suited. For example, in dull weather, switching to black & white can give better results by emphasising the shape and form of your subjects. Meanwhile, in strong, bright light, it can emphasise the interplay of light and shade.

Monochrome can also come in handy under mixed lighting. If you have both natural and artificial light illuminating different parts of the scene, or different types of artificial light, then those areas of the image will show colour casts. This is something that our eyes and brains don’t perceive, so it looks particularly unattractive.



This shot includes unattractive mixed lighting: blueish daylight and orange artificial light. Switching to mono overcomes this quickly and easily

In some cases it can be fixed in post-processing, using local corrections to remove the strongest colour casts. But often a simpler solution is to convert to black & white, which removes the distraction of mixed lighting.

Switching to monochrome can also be useful when shooting under artificial light at high ISOs, particularly with low colour temperature sources like tungsten bulbs. Such light is strongly biased towards the yellow end of the spectrum, and lacking in green and blue. The result is that, when trying to make a correctly balanced colour image, the green and blue channels have to be strongly amplified, giving an unpleasant increase in image noise. But if you deliberately set the ‘wrong’ white balance and shoot in black & white, this can reduce such problems with noise.

IN-CAMERA MONOCHROME PROCESSING SETTINGS

Most cameras these days have plenty of settings for tweaking the look of your monochrome images, and while they give lots of control over how your pictures will turn out, they can equally look daunting for new users. Here we’ll take a look at what they do, and offer tips and recommendations on how to use them.

NOISE REDUCTION AND SHARPNESS

Tweaking noise-reduction and sharpness settings can accentuate or suppress noise, especially when shooting at high ISOs. To some extent this can mimic shooting with fast, grainy film. All cameras are different, so it’s difficult to make specific recommendations here. But try turning down the noise reduction and turning up the sharpening to get grainier, grittier images.

MENU SETTINGS

Brand	Menu option	Setting
Canon	Picture Style	Monochrome
Fujifilm	Film Simulation	Monochrome
Leica	Film Mode	B&W
Nikon	Picture Control	Monochrome
Olympus	Picture Mode	Monotone
Panasonic	Photo Style	Monochrome
Pentax	Custom Image	Monochrome
Samsung	Picture Wizard	Classic
Sony	Creative Style	Black & white





Conventional monochrome mode



'Grainy Film' mode



'Dynamic' mode

COLOUR MODES VS PROCESSING FILTERS

Alongside their standard monochrome modes, many recent cameras also offer a couple of black & white options as processing filters – known by such diverse names as Creative Controls or Art Filters. Where normal mono modes use the camera's standard image processing in terms of contrast and detail rendition, filter modes are much more stylised. They'll often use exaggerated contrast and tonality, and perhaps add in film-grain effects, soft focus, vignetting, and so on. Because of this, processing filters are generally best seen as an end in themselves – giving finished pictures in their own right, rather than as a guide to how post-processed raw images will turn out. Indeed, one important point is that not all brands will allow you the insurance of shooting raw files alongside processing filters anyway, although some will. If not, you may wish to think twice about using them – it can be pretty galling to find that you've taken a great shot in the wrong mode.



Monochrome

Grainy Film

Dynamic

Take your photography to the next level WITH AN SPI COURSE

- Master your camera and hone your photography skills
- Study in your own time and at your own pace
- Receive detailed feedback from an expert photographer



ALL PICTURES © LEE HETT-POWELL



Enrol today and get a **FREE Complete Guide to Photography essential pack***

Including 164-page handbook, 2 tutorial DVDs, Essential Photo Tips Guide and lens cloth

Call **0203 148 4326** or visit **WWW.SPI-PHOTOGRAPHY-COURSES.COM**

PLEASE QUOTE AP AD WHEN PLACING YOUR ORDER *WHILE STOCKS LAST



The distance learning was very helpful to me as I cannot commit to regular days in the week. I enjoy the feedback, which is honest and fair but constructive.

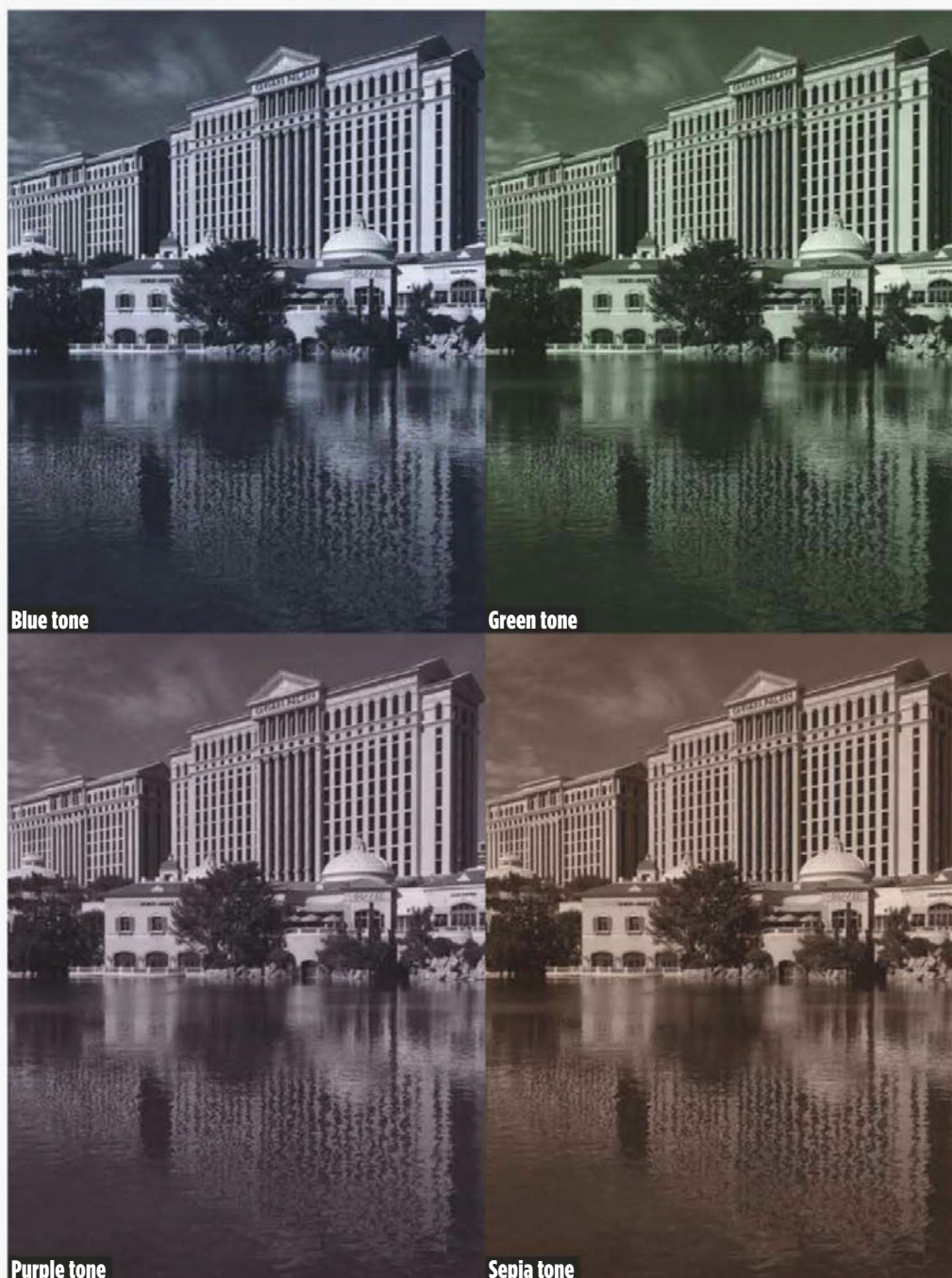
Lee Hyett-Powell
Diploma in Digital Photography

COLOUR FILTERS

Some brands include filter settings that mimic the tonality-controlling effects of coloured lens filters with black & white film. Usually named after the most popular filters (red, yellow, orange and green), they may be pretty baffling to anyone who started photography in the digital age.

These filters allow the user to manipulate how light or dark objects of different colours are rendered in the mono image. Items of the filter colour are lightened, while those of the complementary colour are darkened. So if you select an orange filter, orange objects will be rendered lighter, and blue ones will be darker.

One common use of these filters is to enhance blue skies, darkening them relative to clouds. Yellow filters are quite subtle, while orange and red filters give progressively stronger effects. Green filters will lighten foliage while darkening reds. These effects can all be particularly useful for landscapes.



TONING

Toning refers to colourising a monochrome image so it takes on a single overall tint. Historically, this comes from the practice of treating a silver-based print in the darkroom, normally to make it last longer without fading.

Almost all cameras offer the option to produce sepia-toned images – the kind of yellow-brown tint that's become synonymous with old prints. Most also give a blue-toned mode, which can be very

effective for some images, giving a cool effect in contrast to the warm tones of sepia. Often these settings are a little overblown, but some brands such as Panasonic allow you to adjust the intensity of the toning to give a more subtle look.

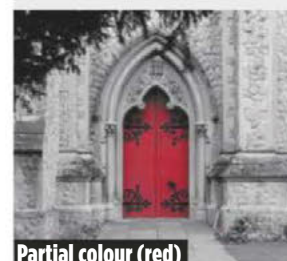
Aside from sepia and blue, a couple of camera manufacturers also offer green and purple toning settings. These are both less obviously related to darkroom techniques, and less likely to give attractive images

– especially green. It's usually best to stick with blue and sepia.

If you're printing at home, toning can help overcome one common problem with inkjet printers, which often struggle to maintain neutral tones throughout the greyscale from white to black. High-end printers overcome this by using one or more grey inks, but this option isn't available for many users. However, adding an overall colour tone can help to mask any colour casts in the midtones.

PARTIAL COLOUR

Partial colour modes are a variant on black & white, where everything in the image is rendered in monochrome aside from a specific colour – usually a primary such as red, green or blue. This can be effective for some images, but it's easy to slip into the realms of cliché (red telephone boxes or buses spring to mind). When done well, this approach can be very effective, but it's best used sparingly.



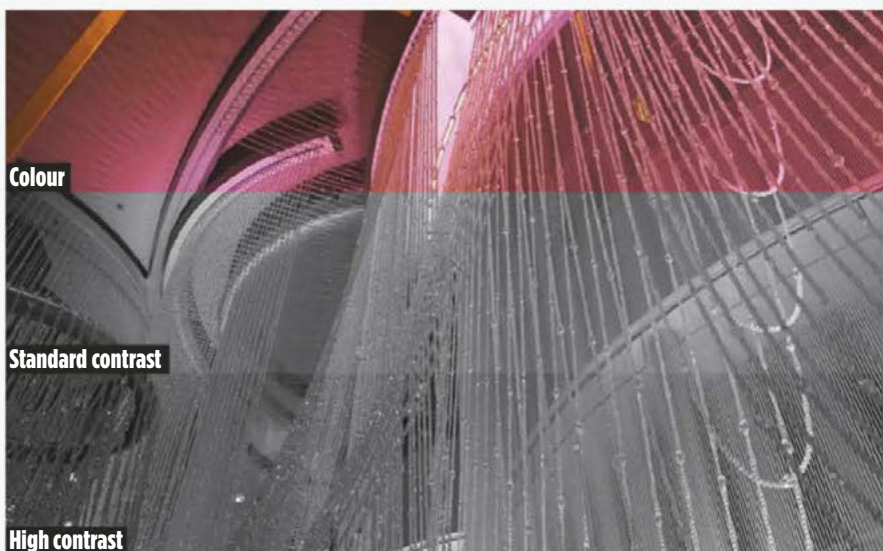
Partial colour (red)

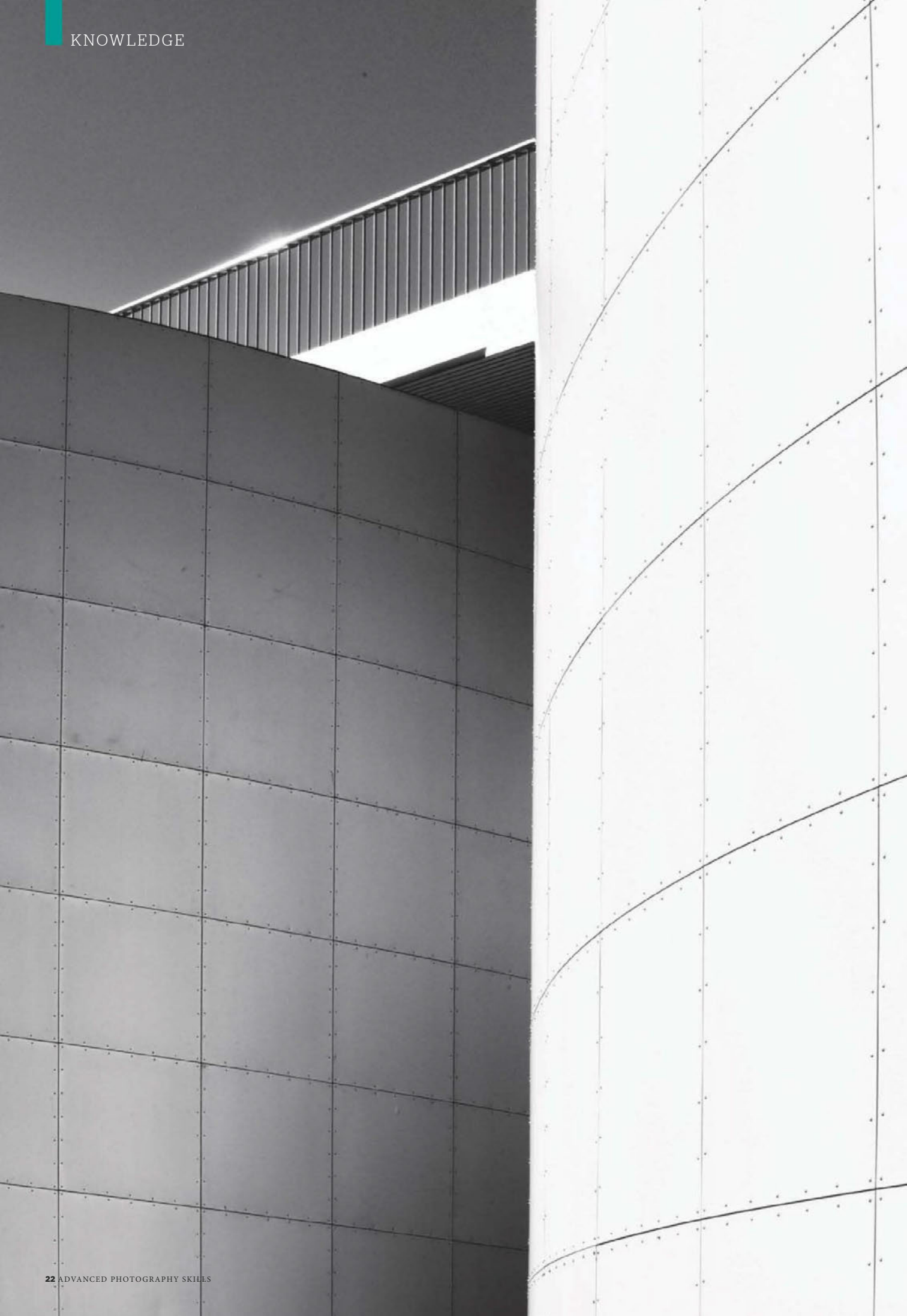


CONTRAST

Most in-camera black & white modes are based directly on the standard colour processing, just with the colour desaturated. While this is a perfectly sensible thing to do from the manufacturers' point of view, it can often leave monochrome images looking a little flat. This can be addressed by increasing the contrast setting to give the image a bit more impact.

In this example (right), the colour version is dominated by one shade, but with small yellow areas distracting the eye. Converting to monochrome turns the shot into a study in geometry, and boosting the contrast significantly improves the look of the image.





Filters for black & white

The days of using coloured filters to control contrast may be over, but filters still have a major role in digital black & white photography, says **Lee Frost**

What's your favourite filter for black & white photography? If someone had asked me that question a few years ago, I would have answered 'red'. Today the answer is 'ND grad', because just as digital capture has changed our approach to black & white photography, it has also changed the filters we need to use.

Coloured filters were the mainstay of monochrome photographers for decades. They used to change the way certain colours produced tones and were used to boost contrast. However, these filters are no longer required because you can replicate their effects digitally. This is just as well – there's little point putting a deep-red filter on your camera lens when you're shooting in colour, even if

Opposite page:
A polarising filter is as useful for black & white photography as it is for colour

Below: Use an ND grad to retain detail in the sky when shooting landscapes

the final image will be black & white. Filters aren't totally redundant, though, and there are four I use almost daily.

POLARISERS

The main purpose of polarising filters may be to boost colour saturation, but they also do other things. For example, they eliminate reflections in water, glass and other reflective surfaces, reduce glare, improve clarity and enhance the sky, all of which can benefit a black & white image whether shot on a dull day or in full sun.

If you shoot a waterfall or a river, a polariser can be used to remove glare from the wet rocks and foliage, and reflections in the water, while its 2-stop light reduction will also allow you to use a slower shutter speed to blur the water. In sunny weather, a polariser will darken a blue sky just as well as a red filter would when used with black & white film – but without changing the tonality of the other colours in the image. Also, if you use a polariser to boost saturation in a colour image and then convert that image to black & white, you'll benefit from stronger tones.

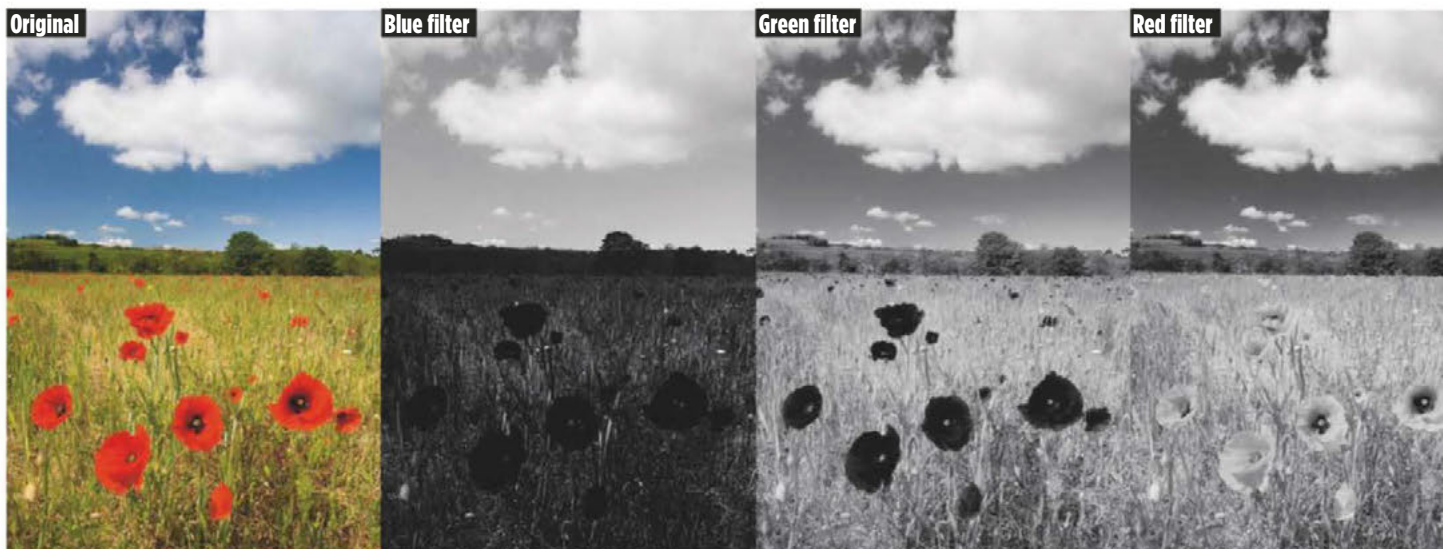
In other words, a polariser is just as useful for digital black & white photography as it is for colour, so don't leave home without one.

ND GRADS

The dynamic range of a digital camera sensor is limited compared to the dynamic range of black & white negative film. Neutral density (ND) grads help you deal with this by toning down the brightness of the sky or other large areas in a scene so that contrast is reduced enough to bring it within the dynamic range of your camera.

I rarely used ND grads when shooting black & white film because the dynamic range of the film was wide enough to record detail in the highlights and shadows, and the sky could be burned in during printing. But with a digital camera it's different. Omit the ND grad and there's a strong chance that the sky will 'blow out' – which





means it overexposes to the point where no details records. By sliding an ND grad over the lens to cover the sky, you can prevent this and record the sky in all its glory.

I carry a set of three Lee Filters ND grads in 0.3, 0.6 and 0.9 densities. They tone down the sky by 1, 2 and 3 stops respectively. I rarely use the 0.3ND grad but it's useful when shooting scenes and their reflection in still water. A 0.6ND grad is best for general use, while the 0.9 is necessary in more contrasty conditions, such as at dawn and dusk.

I favour 'hard-edged' grads over 'soft-edged' as the density is more consistent and I align them while looking through the camera's viewfinder. If you struggle with this method, try live view. I also position the ND grad on the lens before taking an exposure reading. In the days of centre-weighted metering this often resulted in overexposure, but today's multi-pattern 'intelligent' metering systems take ND grads in their stride.

Above: Coloured filter effects can be applied digitally to black & white images

10-STOP NEUTRAL DENSITY FILTERS

The most fashionable filter among black & white photographers at the moment is the 10-stop ND filter, which reduces the light entering your lens by 1,000x, forcing you to use exposures of several minutes in broad daylight. The effects are fantastic, as moving water turns to milk, clouds record as graceful streaks, and people and traffic disappear from busy streets. If you've ever wanted to create fine-art monochrome masterpieces from ordinary scenes, this is the filter to use. Be warned, though, because once you try one, you'll be hooked.

These filters are available from B+W (www.bpluswfilters.co.uk), Hitech (www.teamworkphoto.com) and Lee Filters (www.leefilters.com). There is a long waiting list for the Lee Big Stopper, but Hitech makes an equivalent specifically for the Lee filter holder. Just ask for one with a

A 10-stop ND filter allows you to record motion in a scene

USE ONLY WHEN NEEDED

Anything you place in front of your lens is going to have a detrimental effect on its optical quality, and that includes filters. Therefore, only use them when you need to, don't use more than one unless absolutely necessary and always remove filters that aren't serving a purpose, such as your polariser, which a lot of photographers leave permanently attached to their lens. Also, keep your lenses clean and scratch-free.





1.5mm gasket, rather than the 3mm gasket needed for the Hitech 100 holder.

Your camera's autofocusing and metering won't work with a 10-stop ND on your lens, and you won't be able to see through the viewfinder because it's so dense. Live view is sensitive enough to see through a 10-stop ND filter on some DSLRs, but your best bet is to compose the scene, align your ND grad if you're using one, set the shutter to Bulb (B), focus the lens manually, take a meter reading without the 10-stop ND in place, calculate the exposure, pop the ND on the lens and open the shutter with a remote release. You can calculate exposure for a 10-stop ND filter by multiplying the shutter speed by 1,000. For example, if the correct exposure without the ND in place is 1/15sec, once it is in place it will be $1/15 \times 1,000 = 66\text{secs}$.

NEUTRAL DENSITY FILTERS

If you don't fancy the idea of using a 10-stop ND filter, weaker neutral density filters can be used to increase exposure times but in much smaller doses. It's worth carrying both 0.6ND and 0.9ND filters. These increase the exposure by 2 and 3 stops respectively, or 5 stops if used together. ND filters are ideal when shooting waterfalls, rivers, streams and seascapes, as the increased exposure allows you to use a slower shutter speed to blur the moving water. They are also handy when shooting landscapes in windy weather as you can record movement in blowing grass or swaying trees, or to capture movement when shooting crowds of people, such as commuters spilling off a train. A polariser can be used as a 0.6 ND filter because it cuts the light by 2 stops.

Weaker ND filters are handy for blurring water

DIGITAL FILTER EFFECTS

There are two easy ways to mimic the effects of colour-contrast controlling filters in Photoshop.

If you have a recent version of Photoshop with the Black & White option in the Adjustments dropdown menu, you can use the presets for Red, Yellow, Green and Blue filters. All you do is open your colour image, go to Image>Adjustments>Black & White to convert the image to mono, and then choose one of the presets and save your changes.

A more traditional option is to use Channel Mixer in Photoshop. Open your image and then go to Image>Adjustments>Channel Mixer and click on the Monochrome tab. To mimic the effects of a coloured filter, set the slider for that colour to 100% and the other two to 0%, so for a red filter set the Red channel slider to 100% and the Green and Blue channel sliders to 0%.

I have used both methods, but these days I prefer to add filter effects using Nik Software Silver Efex Pro (www.niksoftware.com). This is a fantastic software package for black & white conversion that gives you all the controls that you could ever need to create stunning black & white images from colour digital files. In order to add a filter effect, simply open your chosen colour image in Silver Efex Pro and then click on the required colour in the Coloured Filters menu to the right of the preview image. The changes will be saved as a layer, which massively increases the size of the image file, but when you have finished you can go to Layers>Flatten Image to reduce the file size. Remember, though, that the conversion and filter effect will then be permanent additions to the image, so do ensure that you make a copy of your colour image before converting it.

You can see the type of effects you'll get from the set of images at the top of these pages. The basic rule to remember is that a colour filter lightens its own colour and darkens its complementary colour, so in the red filter image the poppies appear light and the blue sky dark, but in the blue filter image the poppies are almost black and the sky is very light.

These characteristics can be used to alter the tonal relationship in a black & white image so that the role of specific elements is played down or increased.



Scratching the colour filter array from a DSLR sensor is not for the faint-hearted



Convert your DSLR to black & white

Have you ever thought about converting your DSLR to shoot black & white images only? If you're feeling brave, **Richard Sibley** explains how to do it

There have been a few attempts at producing a black & white-only camera, but the Leica M Monochrom is perhaps the most famous. This Leica model is based on the M9, but only records monochrome, greyscale images. In theory, any manufacturer could produce a version of one of their cameras to shoot in black & white only, by issuing a version with no colour filter array (CFA) on the sensor (see 'How a sensor records colour', right).

WHY CONVERT A CAMERA TO BLACK & WHITE?

When a full-colour image is created, various fine details

can be lost. Digital images are usually demosaiced, as without this process images would just be made of red, green and blue pixels of various shades, devoid of any other colours. Demosaicing is a process of interpolation, whereby the camera processor calculates the various hues in an image based on the red, green and blue values of surrounding pixels.

Although the demosaicing process creates a full-colour image, the nature of the process can also introduce a slight loss in definition, and occasionally image artefacts.

HOW A SENSOR RECORDS COLOUR

A sensor is made up of millions of photodiodes, often called photosites or, confusingly, pixels. Each photodiode records the amount of light that is hitting that particular point, which results in an image map of where the light hits the sensor. Where no light reaches the sensor at all, the photodiode will record no information, resulting in a black pixel in the recorded image. Where the amount of light hitting the sensor exceeds what the photodiode can hold, a white pixel will be recorded. Between these two extremes is a range of grey pixels.

Above each photodiode is a microscopic coloured filter, usually of red, green or blue. As we know, there are various different colour patterns for these filters, known as colour filter

arrays (CFAs), but the most commonly used is the Bayer pattern, where there are two green filters for every red and blue filter. The colour filters ensure that only the light of that filter reaches the photodiode – only green light will pass through the green filter, for example.



WARNING

Do not attempt to do this unless you know what you are doing and are prepared to risk breaking a DSLR

CONVERTING A DSLR TO BLACK & WHITE

To convert a DSLR to black & white, the colour filter array must be removed from the surface of the sensor. This isn't easy, as the coloured filters are bonded to the silicon surface of the sensor. Not only that, but the filters actually sit beneath the microscopic lenses that are positioned above each photodiode.

Removing the micro-lenses and the coloured filters changes the back-focus distance between the lens and sensor, and as such it can lead to slightly soft images, particularly at large apertures. It is possible to adjust the position of the sensor to account for the slight focus loss, usually mechanically by turning some adjustment screws, testing the camera and then making any further adjustments. If your camera has a micro-focus adjustment feature in its camera software, then you may get the result you need using this. However, slight focusing issues are not the biggest problem – that would be damaging the sensor, either in part or completely.

REMOVING THE CFA

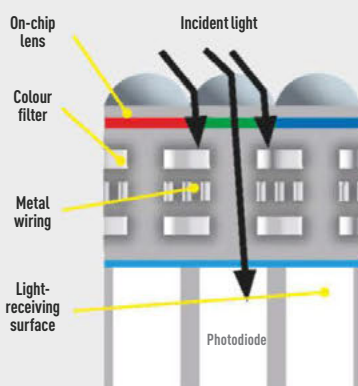
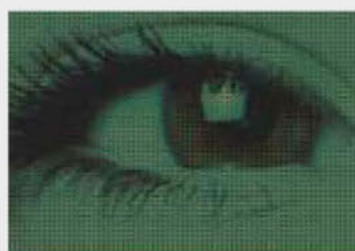
Removal of the colour filter array is not for the faint-hearted. Unlike the low-pass and infrared filters, which can be carefully prised off, the colour filter array needs a more drastic approach. A quick search on the internet shows a few successful attempts by various brave photographers, and there are two methods. The first involves using an abrasive, such as car polish, while the other involves carefully scratching away at the layer of micro-lenses and then the colour filter array, leaving just the bare silicon. The real skill here is to make sure that you scratch or rub away the lens and filter layer without damaging the layer of silicon below. Thankfully, the silicon layer that contains the photodiodes is harder than the layers above, so with some light rubbing and patience it is possible.

THE RESULT

After the removal of the colour filter array, there is still one last hurdle to overcome. The camera or computer software will still demosaic the image when shooting JPEG or raw images, but with no colour filter array in place there is no need for this process. Instead, raw-conversion software that doesn't demosaic, such as the free DCRaw software (<https://www.cybercom.net/~dcoffin/dccraw>), must be used.

The resulting images should have better detail in shadow areas, and make excellent monochrome images.

However, the photodiode below a green filter doesn't actually record the colour green, it only records the amount of light (green light, in this case) that passes through it. This creates a demosaiced image made of just red, green and blue pixels. All that is needed for a DSLR to create a pure black & white is to remove the coloured filters from above the sensor's photosites.



In the mosaiced imaged (left), the RGB pixels can be seen

SUCCESS STORY



Raymond Collecutt, from New Zealand, was one of the first people to perform the 'de-Bayering' surgery on a Canon EOS 1000D in 2012. I asked him how he did it, and any advice he had to offer.

What made you want to give the 'de-Bayering' a try?

I'm an astro photographer and live in a built-up area, so using narrow-band filters was the main driving force behind it. These filters cut out most of the light that comes from light pollution, allowing only a narrow band of light from space to get through. Because of the small amount of light reaching the sensor, you have to get the most from every pixel, so removing the Bayer filters and removing the demosaicing process was an obvious solution. Besides this, it was also a huge saving

compared to the cost of a dedicated mono camera for astro photography, while the larger DSLR sensor also offers a much better field of view, which was a big plus.

Did you ever think this idea would work?

I had no idea if it would work, but I did try it first on a webcam and found it was a very easy process, so I tried it on a Canon EOS 1000D sensor. This wasn't as easy, but to my surprise it turned out OK. I did search the internet for advice beforehand, but found nothing – not even a thread on a forum! All I found was people saying it was impossible.

What advice would you give to those who want to try it?

If you have shaky hands or are unable to see very small things, then I would give it a miss unless you have lots of spare cameras.



Advanced Black & White Conversion

If you want to produce stunning monochrome images, you need to take control. **Phil Hall** shows you how...

Converting your images to black and white may at first appear to be one of the simplest tricks in an image-editing program such as Photoshop, while pretty much every camera has its own B&W filter effect. However, if you want your mono images to really stand out, there's a lot more to it than simply turning down the saturation or choosing the gritty mono filter-effect from your camera's menu.

By using Photoshop's Black & White Adjustment layer as

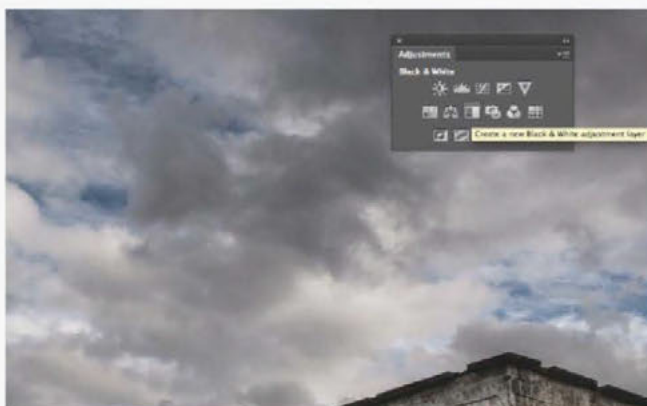
opposed to desaturating the image or simply turning it grayscale, you have much more control over the image, being able to adjust how the colours in the image are portrayed in monotone.

With the image's colour gone, you'll need to rely on contrast and selective adjustments to convey the mood of the image. Lightening and darkening areas of the image (known traditionally as dodging and burning) will allow you to add further depth to the image, whether it's to impart drama or pull it back for a more tranquil look. This can be done with selective adjustments, but Photoshop also features its own dodge and burn tools to do this, while boosting or toning down contrast will add to the mood.

To get the best black & white images will require some manual input, but the results will be worth it



How to convert to mono



1 SELECT ADJUSTMENT LAYER

With your unconverted image open, select the Black & White Adjustment Layer icon in the Adjustments palette. If you can't see it, go to Window>Adjustments. Alternatively you can go to Layer>New Adjustment Layer>Black & White.



2 THE BLACK & WHITE ADJUSTMENT PANEL

The Black & White Adjustment panel allows you to precisely control the various colour tones in the image, with sliders to control Reds, Yellows, Greens, Cyans, Blues and Magentas. Starting with a Default set of adjustments, we'll now refine these to our taste.



3 DARKEN THE SKY

For this image we want to add even more punch to the sky, so to achieve this we'll decrease the Blues slider to -95, then the Cyans slider to -59 and the Magentas slider to 12. To fine-tune the foreground, we'll increase the Reds to +115, Yellows to 75 and Greens to -40.



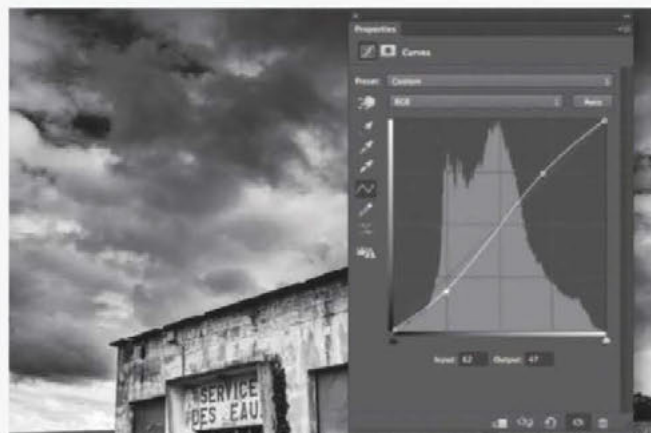
4 DODGE AND BURN

Select the Background layer from the Layer palette (hit F7 if you can't see it), and from the Toolbox, select the Burn Tool (normally hidden underneath the Dodge Tool). Select a large soft brush (around 800px should be fine), and set the Range to Midtones and Exposure to 15%.



5 LIGHTEN DERELICT HUT

By gently brushing across the sky, we'll be able to darken it down a little, enhancing the mood. We'll now select the Dodge Tool to lighten the hut a touch. Select a smaller Brush of 600px and set the Range to Midtones and Exposure to 15%. Now brush over the foreground.

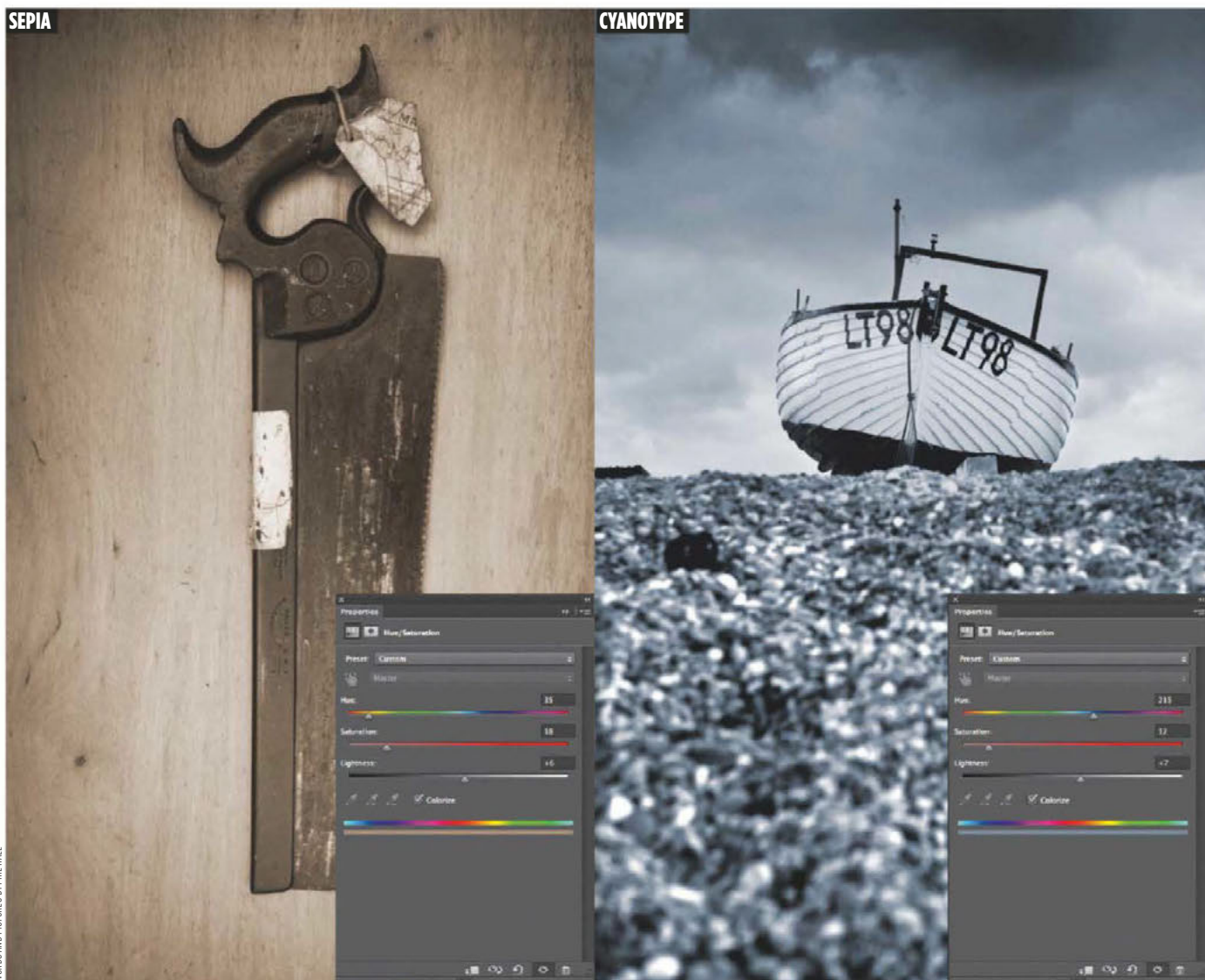


6 BOOST CONTRAST AND SAVE

Finally, select the Curves Adjustment Layer icon and set a subtle S curve to boost the contrast. With that done, save the image – if you want to be able to make changes to either Black and White or Curve Adjustment Layers, save it as a TIFF or PSD file which preserves layers.

Toning your mono images

Enhance your Black & White images by creatively toning them



WORDS AND PICTURES BY PHIL HALL

Mono images don't just have to be grey. By adding a colour tint to your image, known as Duotoning, you can add another layer of mood to the photograph, whether it's a warm, yellowy sepia look for a nostalgic feel or a blue to add coolness to the shot, for instance. Here's how to create two popular duotones that you can then adapt if you wish.

SEPIA

With your image converted to mono along with any other adjustments to contrast applied, select the Hue/

Saturation Adjustment icon and in the dialogue box, tick Colorize. From the Presets, select Sepia. At the moment, this is a little too intense, so we'll reduce the Saturation to 18 and Lightness to +6.

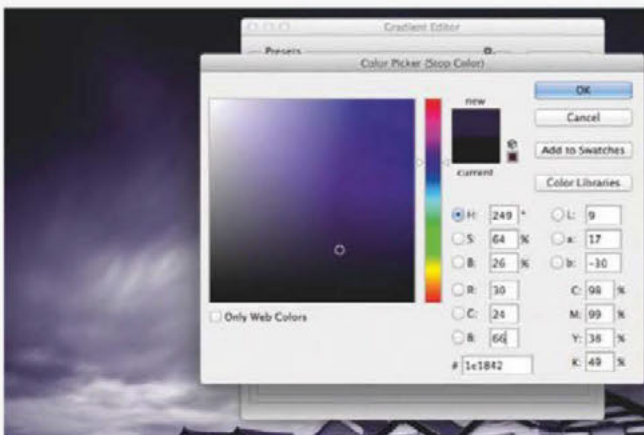
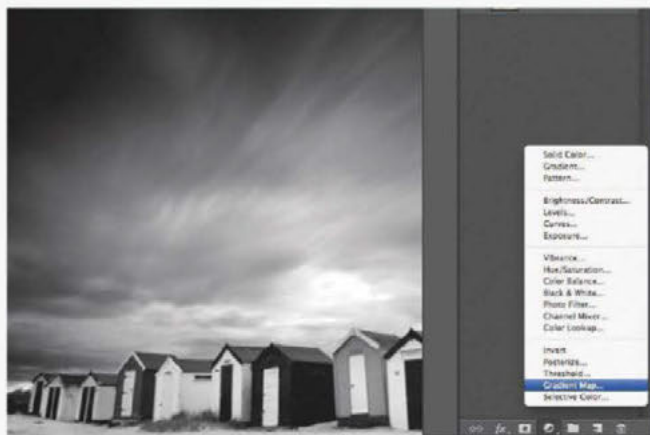
CYANOTYPE

Just as with the Sepia toning effect, once you've converted your image to mono select the Hue/Saturation Adjustment icon and in the dialogue box, tick Colorize. This time from the Presets, select Cyanotype. Again, this is too intense, so knock back the Saturation to 12 and increase the Lightness to +7.

SPLIT TONING

Split-toning takes toning one stage further, introducing an additional colour, and was a popular darkroom technique. Thanks to a clever mix of processing chemicals, tones in the image would literally be split, which would result in a colour shift in the highlights and shadows.

One great way to achieve a split-tone effect with digital images is to create a Gradient Map. While this may sound like it's quite complex, once you've created your first Gradient Map, it's very easy and you'll then be able to start creating your own split-tone mixes.

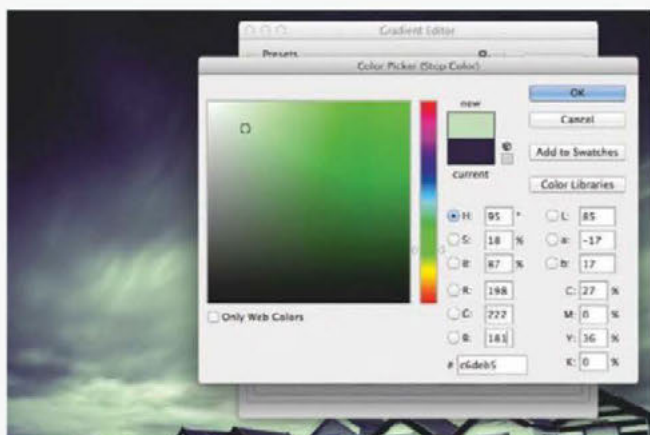


1 SELECT GRADIENT MAP

Once you've converted your image to mono, bring up your Layer palette (F7) and at the bottom, click on the Create new fill or adjustment layer icon at the bottom of the palette. From the drop-down menu, select Gradient Map.

2 MAKE A COLOR STOP

Click on the Gradient to bring up the Gradient Editor dialogue box. From the Presets, select Black, White. Click a quarter of the way along so the Location is 25% to create a Color Stop. Click on the Color, and pick a dark colour from the Color Picker and hit OK.



3 SAVE GRADIENT

Now click three-quarters along to add another Color Stop – Location should be about 75%. Click on the Color again and select a light tone for the highlights and hit OK. Now hit New to save the Gradient in the Presets so you can use the gradient on another image.

4 ADJUST OPACITY

The effect will probably look too strong, so – making sure you have the Gradient Map layer selected – we can use the Opacity control to vary the intensity of it, in this case taking it right back down to an Opacity of 20% to produce some subtle tones.

Making mono conversions in Camera Raw

BEFORE

The original raw colour file before conversion



Shooting in raw mode means you can be as creative as you could in the darkroom. **Martin Evening** describes two black & white conversions

If you want to produce high-quality black & white photographs, the only option is to shoot in raw mode. If the capture data starts out in colour, you'll have the chance to make use of the colour data information to determine what is the most suitable black & white outcome. If, on the other hand, you shoot directly in black & white in JPEG mode, you'll lose the opportunity to get creative.

When editing raw files, the main things that affect the outcome of a black & white conversion will be the selected white balance and the black and white slider settings (such as in the HSL/Grayscale panel). When using Camera Raw or Lightroom, you may find it useful to select the Target Adjustment tool and use this to click on an area of interest in the image (such as the sky), and drag upwards to lighten or drag downwards to darken. This will set the black and white sliders automatically. Interestingly, the sliders in the Camera Calibration panel can also be used to apply further fine-tuned adjustments. You should find that these provide an extra level of control with which to enhance a black & white conversion.

The Split Toning panel controls in Camera Raw and Lightroom can be used to add colour-toning effects. The sliders in this panel can be used to adjust the hue, colour and saturation for both the highlights and shadows. There is also a Balance slider that lets you offset the balance between the shadow and highlight colour toning and provides a nice fine-tuning control for your split-tone effects.

CONVERSION TO CREATE A DARK-SKY EFFECT

1 STARTING POINT

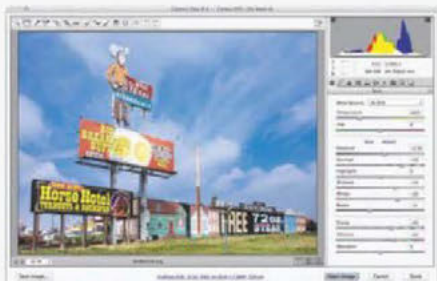
This shows the colour original, which was shot outside the famous 72oz steak house in Texas, in the USA. The steak is free if you can eat one in an hour (I chose the Caesar salad). I selected this particular image to demonstrate a black & white conversion because it had a good mix of colours to work with.

2 CONVERT TO GRAYSCALE

First, I went to the HSL/Grayscale panel and checked the Convert to Grayscale box. This converted the colour image to black & white using a default conversion, in which all the sliders in the HSL/Grayscale panel were set to 0. As you can see, there is not much drama in the black & white conversion this produced.

3 WHITE BALANCE

I then adjusted the White Balance, with the Temperature slider dragged to the left to 3000, combined with a Tint setting of -100, applying a cooling white balance to the underlying colour data. This in turn affected the outcome of the black & white conversion after I clicked the Auto option in the HSL/Grayscale panel (see Step 2).



The final shot, which has been converted in Lightroom with some split-toning



4 SPLIT TONING PANEL

I adjusted the Highlights and Shadows, dragging the Hue and Saturation sliders to achieve the warm split-tone effect. You'll notice that adjusting the Balance slider will also affect the outcome. Even if the Highlights and Shadows settings are identical, adjusting the Balance slider can still have quite a subtle effect.



5 FINE-TUNING

To produce a stronger black & white conversion effect with more impact, I needed to manually adjust the sliders in the HSL/Grayscale panel. In this instance, I dragged the Yellows and Greens sliders to the right to lighten the grass, and dragged the Aquas and Blues sliders to the left to darken the sky.



6 CAMERA CALIBRATION

For stronger and even more dramatic black & white conversions, you can also use the Camera Calibration panel sliders. Here, you can see that I adjusted the Green Primary Hue and Saturation sliders, as well as the Blue Primary Hue and Saturation sliders to produce a really dark sky and a high-contrast effect.



There are a number of ways you can take a mono conversion to extremes. The following black & white infrared technique illustrates just one of the ways you can achieve a creative black & white conversion using Camera Raw or Lightroom. I took a photograph of a woodland scene and aimed to lighten the green colours to the point where they appeared luminescent. This can be done by applying an extreme Tint slider adjustment combined with the B&W panel settings in Step 4. I also applied a negative Clarity adjustment to produce the glow effect that is typically associated with infrared photography, and added a Grain effect via the Effects panel. You can use the steps shown here to apply this same type of black & white infrared effect to other images, but you'll find that these settings will always need to be fine-tuned on an image-by-image basis. It's not a technique that can be guaranteed to work on every photograph, or as a saved preset.



Below: The native colour image is perfect for a faux infrared conversion



The final image mimics the look of an infrared shot

CONVERSION TO FAUX INFRARED EFFECT

1 STARTING POINT

This shows the 'before' image. The photograph is ideal with which to demonstrate the following faux infrared effect because it contains a lot of green foliage, plus there are the bluebell flowers, which can all be made to appear lighter. In this first step, the White Balance setting was left at the default 'As Shot' setting.



2 WHITE BALANCE

In this step, I kept the image in colour and adjusted just the White Balance sliders. Here, I dragged the Temperature slider to the right to apply a warm white balance and set the Tint slider all the way over to the left to -150. This made all the green colours (the foliage) as bright a green as possible.



3 CONVERT TO GRAYSCALE

I then went to the HSL/Grayscale panel and checked the 'Convert to Grayscale' box. I returned to the Basic panel, where I applied the tone adjustments. I lightened the Exposure setting, set Highlights to -100 and applied a negative Clarity of -23, which added a nice soft glow to the photograph.





4 ADJUST SLIDERS

I went to the HSL/Grayscale panel again. I dragged the Yellows slider to +29 and the Greens slider to +40, and dragged the Aquas slider to -53. Because of the underlying green white balance, this adjustment caused the leaves to glow more – almost like the way infrared photographs record green foliage.

5 ADJUST EXPOSURE

I then returned to the Basic panel, where I decreased the Exposure by around 1 stop, so that the brightest portions of the photograph – the leaves – did not appear too bright or get blown out. That more or less completes all the steps needed to produce the infrared look, but there is one more thing that can be added...

6 FINISHING TOUCHES

I then used the Split Tone panel to add a split-tone colouring effect, and finally, added a Grain effect via the Effects panel (Amount 60, Size 25 and Roughness 15). However, if I wanted to apply this black & white infrared effect to other photographs, I would need to save these settings as a custom preset.



Mono & Moody

Ian Bramham explores the way that shooting in mono can evoke feelings and emotions that are infinitely harder to capture in colour



The changeable weather conditions and lighting really make this photograph



ALL PICTURES © JAM BRAMHAM

Look for graphical elements in a shot



Landscape photography is very wide ranging, encompassing everything from industrial and urban cityscapes through to the more traditional rural and coastal scenes. There is something for everyone.

The UK and Europe are both densely populated, and as a photographer I am fascinated by the way in which elements of the natural and man-made environment often merge to produce a landscape that shows our human influence stretching back through the generations.

EXPRESSION

What is it that raises the level of some landscape photographs to that of art? For me, it is when the photographer has a strength and clarity of vision, and is able to express that vision through their work to evoke feelings and emotions. Arguably, the greatest landscape photographer was Ansel Adams, who described successful landscape photography as 'all a matter of feeling'. In fact, he went as far as to say that a great photograph should be 'a true expression of what one feels about life in its entirety'.

Like many photographers working in black & white, Ansel Adams believed that the medium offered him a much greater opportunity than colour to express his feelings and emotions. Without the obvious distraction of colour, black & white photography allows us to get closer to being able to show the real essence and inner beauty of the subject of our photographs.

LESS IS MORE

When I first became interested in photography, I spent the first year or so taking photos that were little more than snapshots. I was struggling to take shots that had any artistic merit. But gradually I evolved a simpler and simpler approach to composing my photos in the viewfinder that strengthened their impact by making them less cluttered and messy. It also had the happy side effect of making it easier to get good balance across the differing elements.

For any of you who may be struggling to achieve simple but strong composition in your photos, I've found that it helps if you think of composition as a reductive process rather than an additive one. In other words, the next time you have your eye at the viewfinder, instead of asking yourself what you want to include in the frame, ask yourself what you can exclude from the frame, to make it simpler and more direct. We live in a fast-moving and complex world, yet I derive great enjoyment and a fantastic sense of inner peace when I'm out with my camera taking simple and harmonious photographs.

BALANCE AND HARMONY

Even for beginners, the subject of visual balance in the composition of landscape photos is a relatively

KIT LIST

WEATHER-SEALED CAMERA AND LENS

▶ I get some of my best shots in unpredictable weather, so my gear gets very wet. It's reassuring to know it will keep working.



CABLE RELEASE

▶ My Nikon D300 camera doesn't have built-in Wi-Fi, so I use a cable release for my tripod work. It's a Nikon MC-36, which is very versatile.



PHOTOSHOP

▶ Post-processing is an important step in the production of black & white photos. I use Photoshop CS6, which is an extremely useful program.



CALIBRATED MONITOR

▶ I use a Spyder4PRO to calibrate my computer screen, and I prefer to use a commercial lab for my prints. The results I get back closely match what I've seen on my monitor.





Gorgeous light and a long exposure help to deliver a striking mono image

Say cheese to our camera equipment insurance

Offer available only to UK residents aged 16 and over. See our website for further prize draw terms and conditions. Offer available until 31/03/2016.

WIN
A VANGUARD BAG!
Every new policy will be entered into a draw to win 1 of 10 Vanguard bags



Amateur Photographer
Insurance Services

Insure your camera and accessories today!

COVER INCLUDES

● **Accidental damage**

Up to £25,000 worth of cover for your camera, equipment and accessories

● **Theft**

Cover for theft of your camera, equipment and accessories including from a vehicle

● **Hire in the event of a claim**

Hire cover included as standard whilst we replace or repair your camera

● **Full Worldwide Cover**

UK residents only required to be in the UK for 1 day in any period of insurance

● **Low excess**

Standard excess only £50

● **New for old replacement**

New for old on your specific camera available, including vintage or rare items

● **Public liability**

Protection for you against damage to another person or their property

● **Personal Accident**

Optional cover available to protect yourself when using your camera or equipment

● **Mechanical Breakdown**

Option to add Mechanical Breakdown cover on items purchased from new less than 5 years ago

* Mon to Fri 9am to 6pm

Call now **0844 249 1902***
www.amateurphotographer.co.uk/apprintad

POLICY TERMS, CONDITIONS & EXCLUSIONS APPLY. FULL DETAILS CAN BE FOUND IN OUR POLICY DOCUMENT WHICH IS AVAILABLE ON OUR WEBSITE. AMATEUR PHOTOGRAPHER INSURANCE SERVICES IS A TRADING STYLE OF THISTLE INSURANCE SERVICES LIMITED. AUTHORISED AND REGULATED BY THE FINANCIAL CONDUCT AUTHORITY. A JLT GROUP COMPANY. REGISTERED OFFICE: THE ST BOTOLPH BUILDING, 138 HOUNDSDITCH, LONDON EC3A 7AW. REGISTERED IN ENGLAND NO 00338645. VAT NO. 244 2321 96.

■ straightforward concept to get to grips with, and achieving it is made a lot easier using simple principles. For successful black & white landscape photography, however, the issue of balance goes much further than just good visual composition – there are additional types of balance that should be considered.

For example, you can compose your photographs so that the elements in the frame not only achieve a visual balance, but also reveal a significant ‘emotional’ relationship with each other. An example of this is my photograph of Fiddlers Ferry Power Station in Cheshire (right), showing the power station and the dead tree. The composition is classically arranged with the foreground and background elements balancing each other visually. However, the relationship between the coal-fired power station and the dead tree intentionally goes beyond the simple foreground/background relationship of classical landscape photography.

Another important issue in mono landscape photography is that the overall balance of light and dark tones within the photograph is crucial to its success. Achieving this type of balance requires experience and it is usually a blend of good initial composition, combined with a personal vision of what you want to achieve in post-processing.



This classically arranged composition delivers balance to the scene

BEAUTY IN IMPERFECTION

The fact that beauty can be found in imperfection is perhaps a controversial view, but I believe the advent of digital technology has made it too easy for us to produce photos that are ‘perfect’, without any kind of visible flaw. As a result, this quest for perfection can often result in photos that feel soulless and lack personality.



Long exposures can result in something unexpected, thanks to the shutter staying open

Don't get me wrong, though, as I love my digital camera and I love the ease of processing my photos in Photoshop. I'm not advocating a mass return to film, but I do think we need to use restraint when post-processing our digital photos. It's not necessary to clone out every perceived 'imperfection' or show detail in every highlight and shadow.

I really enjoy long-exposure photography, often using exposure times in minutes rather than seconds. It's a technique that can help simplify composition, but a big part of what I love about this type of photography is the lack of control over the end result. Often I get lovely

surprises when I see the results because something unexpected happened during the time that the camera shutter was open (see my photo of London's Millennium Bridge on page 41).

If we can learn to see the beauty in our sometimes imperfect and often fleetingly impermanent environment, to appreciate the visual harmony and balance in our landscapes, and to express that beauty and harmony through photographs that have a natural strength and simplicity, then not only will we enrich our lives, but we may also communicate our love of the landscape to others.

LONG EXPOSURES

There are many reasons why I love long-exposure photography. It is great as an aid to simplify composition, particularly near water or in the city, for contrasting cloud movement or light trails against a stationary subject, and for the lovely surprises that sometimes creep into the frame while the shutter is open. Above all, however, I've grown to love the way that it slows my photography down, giving me plenty of time to appreciate the landscape and to consider composition and the way the light is interacting with the subject of my photos.

For daytime long-exposure photos I use neutral density filters. I have a 10-stop from Lee and a 6-stop from B+W. When stacked, they give 16 stops of light reduction, which allows me to take long exposures of 2mins, 4mins or 8mins, even at midday in bright sunshine.



IAN'S TOP TIPS

In the UK and Europe, my favourite seasons for mono landscape photography are autumn and winter. Not only are sunrise and sunset times at a more sensible hour (I get to stay in bed longer), but also I love the changeable weather conditions at these times of year. When the weather is so changeable, there is always a great chance of capturing interesting light to enhance the resulting images. My office is in Manchester and the city is well known for its fog and mist during the autumn and winter months. Fog and mist can really help to isolate subjects from the background and add a wonderful sense of mystery. Trees are one of my favourite subjects for photography, and I find that they are at their very best in winter once they have lost their leaves and the delicate yet powerful structure of their branches is revealed.



CHANGEABLE WEATHER

One of the first big breakthroughs that I made with my black & white landscape photography was the realisation that it was a great idea to go out with my camera when changeable or stormy weather was forecast. This is Victoria Harbour in Hong Kong during a monsoon thunderstorm.



GREAT LIGHT

As landscape photographers, we all live for those occasions when the light is so beautiful that it stops us in our tracks. I photographed this lovely display of sunlight breaking through clouds during a road trip along the stunning black volcanic coast of Iceland.



SIMPLICITY: WHY IT WORKS

Iceland is a fantastic location for mono landscape photography, with dramatic waterfalls and geysers, the northern lights and black volcanic sand beaches with dramatic cliffs overlooking the North Atlantic ocean. These two photos were taken early one morning on the coast at a place called Vik. I had been in the same spot on top of the cliffs with my camera and tripod since before dawn, photographing the towering basalt sea

stacks. I was entranced by the changing light and cloud formations, and by the contrast between the white of the Atlantic rollers and the black basalt sand of the beach.

After a while, I noticed that the composition could be simplified by excluding the nearest sea stack. Moving the camera slightly to the left has emphasised the lovely curved shape of the beach and it's now a much stronger picture.



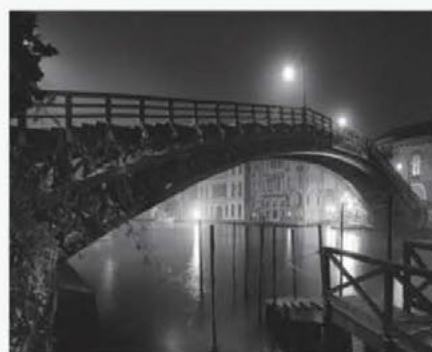
INTO THE SUN

It's always worth having a go at shooting into the sun. The results can often be unpredictable, but they are always interesting and you never know when you might get something really special. This shot was taken at sunset on the north-west coast near Liverpool.



DRAMA

Sometimes what I look for in my black & white landscape photography is drama rather than beauty. Industrial landscapes lend themselves well to this kind of approach – this photo was taken at dusk at Fiddlers Ferry, a coal-fired power station near my home in Cheshire.



FOG AND MIST

Fog and mist can bring an aura of mystery to photos, especially in black & white. This is the Ponte dell'Accademia, which spans the Grand Canal in Venice, Italy. I was there in October and lucky enough to get misty conditions on several mornings in the early hours before dawn.

A lavender field in the Cotswolds takes on a completely different look and feel

Form, texture and tone

Discover how to create unique stand-out imagery with infrared, as expert **Russ Barnes** explains

Standing out from the crowd is not an easy proposition for today's landscape photographers. There's a lot of exceptional work around, which makes it very difficult to feel that your contribution has any impact.

I read an interesting article on this subject recently by travel photographer Steve Watkins, who talked about taking risks in landscape photography. It wasn't about putting yourself in physical danger in order to capture a unique moment, but about taking risks with composition, trying a new technique and carving out niches.

I completely connected with this sentiment, as I've worked hard to stretch my comfort zone in order to exist in the relatively small space occupied by photographers who are actively trying to produce something a little

KIT LIST



REMOTE RELEASE

❑ You'll probably want to use a remote timer switch to avoid vibrations and enable easy long-exposure programming. Third-party switches are cheap to obtain on the internet.





COMPATIBLE LENSES

❑ Checking your lenses against a hotspot database such as www.kolarivision.com/lenshotspot.html is highly recommended. Not all lenses perform well with infrared, particularly at smaller apertures such as f/11-f/16.



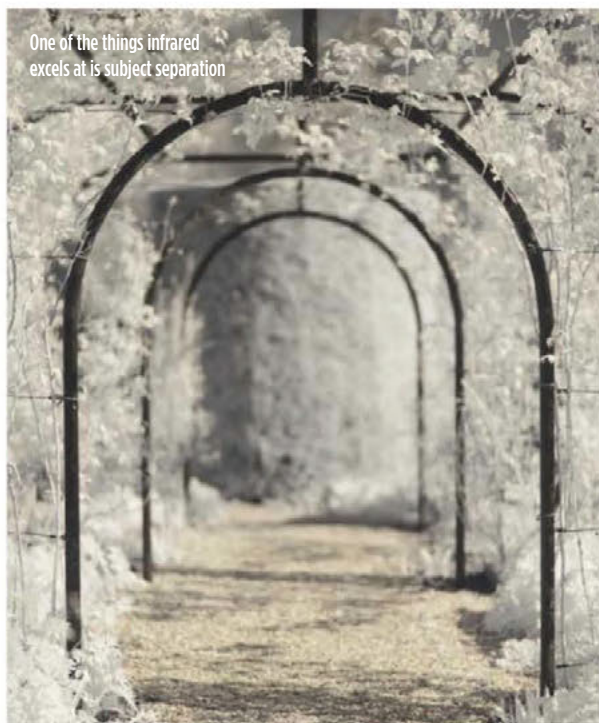
INFRARED FILTER

❑ If you're starting out, an infrared screw-on filter is the way to go. You'll need to pick a filter size to fit your chosen lens, but the Hoya R72 does the job nicely.



CONVERSION

❑ If you are confident that infrared is going to form a large part of your portfolio, consider a 720nm sensor conversion instead of a screw-on filter to avoid perpetual long exposures.



One of the things infrared excels at is subject separation

different. In my view, if you're not testing yourself artistically then you're not growing as a photographer, so your potential is being limited by your own lack of imagination or irrational fear of failure.

This is where infrared photography wandered into my consciousness and piqued my interest. Monochromatic images had captivated me for years, and it struck me that this was a medium where you can really focus on the core structure of a subject – its form, texture and tone. Sometimes I've felt that my black & white images have lacked a certain something, and I found myself looking for a technique that could not only support strong composition, but also had the potential to transport the viewer to another place. Perhaps it was somewhere that could be described as bordering on fantasy.

UNIQUE VISION

Infrared squarely delivers for me in this respect and I love the idea that while you get to photograph real things and real places, you produce an almost unreal vision in the final frame. Best of all, there aren't that many photographers who seem to pursue it as a technique, so it's an opportunity to draw some interest and, with a bit of practice, create some stand-out imagery. It's not infrared for the sake of infrared, though, as I'm not a fan of so-called 'false-colour infrared'. Rather, my interest has been all about manipulating the technique to create contrast-rich monochromatic photography.

So when and how does infrared really come into its own? As many landscape photographers will probably agree, summer is usually their least favourite time of year. Ridiculously early sunrise times, harsh light lasting up to 18 hours a day and testing heat – it's not where we really thrive, and many will sit out the days patiently waiting for sunset or even longer until autumn begins.

But this is where infrared is a true game changer – the more light the better. Shooting at midday in the fabulous wilderness of Exmoor National Park in south-west England during a roasting spell in June last year was an absolute boon, and I got some of my favourite images of the year. I can't wait to go back. At last I have something to keep me completely occupied and focused through the long summer days, with the opportunity to make



Foliage turns to white, producing a ghostly effect and unique tones that set it apart

something just as artistic as any other season in the year.

The other true key ingredient is foliage, and fortunately the landscape is stuffed with things that are full of chlorophyll, the agent that makes things green and reacts very nicely with the infrared spectrum. Where there is green you have the potential to make white, and where there is blue you have the potential to make black. There are many other factors, of course, but hopefully you can start to imagine what sort of world you can depict in photographs with that sort of recipe.


WORTH THE EFFORT

The technical side of infrared does contain an amount of complexity, but anything worth doing isn't always easy. If it were, everyone would already be doing it. There is a tick-list of resources that you will want to read about on this subject, but fortunately there is extensive online



content. An amount of post-processing of images is certainly involved, so shooting raw files is essential, while some understanding of setting a manual white balance is required (if using an infrared screw-on filter, set it to 2,500K or the minimum your camera supports). You will also want to have a look into 'infrared hot spots' for your existing lenses (unfortunately, infrared light doesn't necessarily transmit well through certain lenses) and focusing with infrared enters new territory (using live view is best). Finally, you will need to buy an infrared filter.

ACCESSIBLE

However, the whole infrared technique is very accessible. My first purchase that propelled me into infrared was a second-hand Hoya R72 (720nm) filter on eBay that cost me £20. It's a screw-on filter, so it goes in front of your lens and is akin to using 10-stop neutral density glass, 

FOCUSING

You'll need to take extra care with focusing if you're using an infrared filter, as lenses are designed to focus on visible – not infrared – light. To compensate for this, it's advisable to offset your focus. While not so prevalent on modern lenses, many optics carry an infrared focus marker to indicate how far you must offset your focus to compensate for infrared light. This is merely a guide, as it will vary depending on the filter you use, and so long as an aperture of around f/8-f/11 is used it should be enough to ensure that the depth of field is sufficient to be maintained throughout the scene.



Shooting under the midday sun produces much more pleasing tones than normal



although there is no neatly defined exposure table to work off because infrared is a very much more random world than that. Nonetheless, this filter gets a top recommendation from me if you're just starting out. Second-hand bargains are hard to find, but it's a lot cheaper than buying a fully converted camera with its sensor adapted that allows you to take 'normal' exposures with more light entering the lens.

It's been a journey to get to the point where I know what to expect, how best to manipulate a scene and what sort of

I waited and waited for the right day, side light, broken cloud and leaf growth for this shot

kit works best. I went from my Hoya filter to getting a Nikon D7000 converted and then a year ago went 'all in' and converted my Nikon D800 with a 720nm filter.

There's no going back on a sensor-level filter conversion so it was a big step, but I have no regrets. I used Advanced Camera Services (www.advancedcameraservices.co.uk), which supplied me with an excellent product and service. A DSLR sensor conversion will cost around £300 when you're ready to make that final commitment.



Step-by-step

How to: Infrared

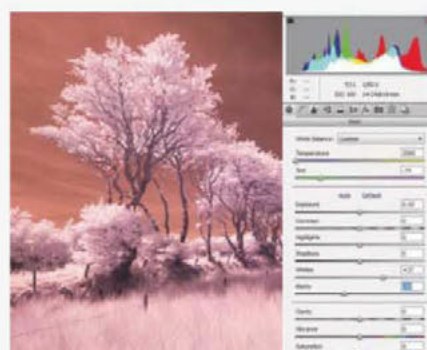
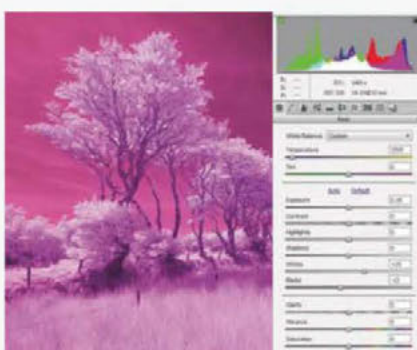
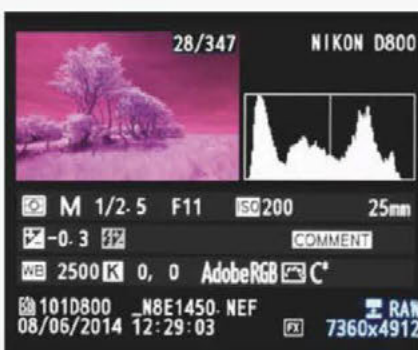
Follow these simple steps to improve your raw image

Here I'll go through the processes needed to get from a somewhat pink raw file to a nice contrasty monochromatic image, but before I do that it's worth reiterating some thoughts on composition.

Shooting infrared really shouldn't change the conventional approach to creating a compelling photograph. Use shadow to create depth, and be aware of your subject matter, the position of your light source and what you want your final frame to say.

A lot of infrared images I see are tonally flat and compositionally weak because the photographer has got carried away with the fact they are using the infrared spectrum and forgotten about everything else. Owners of 10-stop neutral density filters have occasionally been known to have a similar tendency, so remember it's not about the technique, it's about showing your subject in the most captivating way possible.

Use the bright, blue-sky days of summer to your advantage



1 TAKING THE SHOT

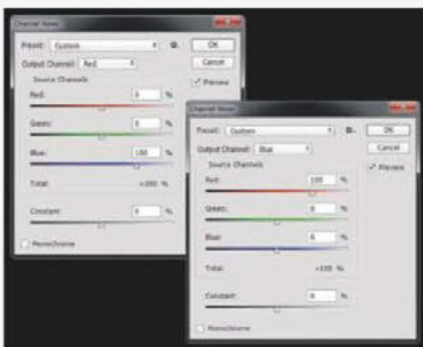
Don't be alarmed – if you're using a filter like the Hoya R72 this is what your file is going to look like. Use a tripod, a low ISO sensitivity, focus via live view and 2500K white balance. It's trial and error on the exposure time. Check your histogram to ensure you don't blow your highlights.

2 OPEN THE RAW FILE

Opening the raw file in the Adobe Camera Raw interface in Photoshop gives us our first chance to improve the shot. The base image will have relatively low contrast and a heavy pink cast. Use this opportunity to remove any sensor dust using the Spot Removal tool.

3 WHITE BALANCE ADJUSTMENT

Now take the White Balance Eyedropper tool (3rd tool from top left) and click the foliage areas in the frame to neutralise the white balance and deal with the heavy pink cast. Capture NX for Nikon cameras also completes this task exceptionally well. Increase the Whites and deepen the Blacks using the sliders.



4 COLOUR CHANNEL CHANGES

Now open the image in the full Photoshop interface. Go to Image>Adjustments>Channel Mixer and make the changes as shown above in the Red and Blue colour channels. Creating a Photoshop Action for this step is useful. The result will be something that's starting to look more usable.

5 FALSE-COLOUR INFRARED

At this point your file should look something like the image above. This is where you can choose to explore false-colour infrared and experiment further or convert the image to mono and work on tonal contrasts. I use Silver Efex Pro 2 as my mono conversion tool of choice.

6 FINAL FRAME

This is the end result, and one I'm particularly happy with. Taken on Exmoor with the Nikon D800, I love the fine details on show here. I used the bright light in the middle of a summer's day and still got an abundance of tone, texture and dynamic contrast thanks to my positioning.

SPECIAL SUBSCRIPTION OFFER

Subscribe

to What Digital Camera and

SAVE

up to

43%

PLUS, enjoy these great subscriber benefits:

- Save up to 43% off the normal subscription rate
- That's just £2.54 per issue!
- Enjoy the luxury of home delivery
- Go Digital! Download your magazine right away. Every subscription package includes access to the digital version for iPad and iPhone*
- Get exclusive Rewards for subscribers every month. Join Rewards at whatdigitalcamera.com/rewards



Subscribe online at

wdcsubs.com/13A



Or complete

the coupon below



THE DIRECT DEBIT GUARANTEE • This Guarantee is offered by all banks and building societies that accept instructions to pay Direct Debits. If there are any changes to the amount, date or frequency of your Direct Debit Time Inc. (UK) Ltd will notify you 10 working days in advance of your account being debited or as otherwise agreed. If you request Time Inc. (UK) Ltd to collect a payment, confirmation of the amount and date will be given to you at the time of the request. • If an error is made in the payment of your Direct Debit, by Time Inc. (UK) Ltd or your bank or building society you are entitled to a full and immediate refund of the amount paid from your bank or building society – If you receive a refund you are not entitled to, you must pay it back when Time Inc. (UK) Ltd asks you to • You can cancel a Direct Debit at any time by simply contacting your bank or building society. Written confirmation may be required. Please also notify us.

Complete this coupon and send to: **FREEPOST RTKA-YLJG-HAAK, Time Inc. (UK) Ltd, Rockwood House, 9-16 Perry Mount Road, HAYWARDS HEATH, RH16 3DH (NO STAMP NEEDED – UK ONLY)**

YES! I would like to subscribe to What Digital Camera and save up to 43%

Please tick your preferred payment method:

☐ UK Direct Debit - **Pay only £16.49 every 6 months, SAVING YOU 43%** **TOP OFFER**

☐ 2 years (26 issues) Credit Card - **Pay only £66.49** (full price £117.20) Saving 43% across the two years

☐ 1 year (13 issues) Credit card - **Pay only £34.99** (full price £58.60) Saving 40% across the year

Your details

Mr/Mrs/Ms/Miss: Forename:

Surname:

If you would like to receive emails from What Digital Camera and Time Inc. (UK) Ltd containing news, special offers, product and service information and, occasionally, take part in our magazine research via email, please include your email below.

Email:

Address:

Postcode:

Home Tel No: (inc. area code)

If you would like to receive messages from What Digital Camera and Time Inc. (UK) Ltd containing news, special offers, product and service information and, occasionally, take part in our magazine research via your mobile, please include your mobile phone number below.

Mobile No:

Date of Birth:

I would like to send a gift to:

Please also fill out 'Your Details' on the left. To give more than one subscription, please supply address details on a separate sheet.

Mr/Mrs/Ms/Miss: Forename:

Surname:

Address:

Postcode:

Choose from 3 easy ways to pay:

1. I enclose a cheque/postal order made payable to Time Inc. (UK) Ltd., for £

2. Please debit £ from my:

☐ Visa ☐ Visa Debit ☐ MasterCard ☐ Amex ☐ Maestro Card No:

Start Date (Maestro only): Issue No. (Maestro only): Expiry Date:

Signature:

(I am over 18)

Date:

Offer open to new subscribers only. Final closing date for all orders is **March 31st 2016**. The full subscription rate is for 1 year (13 issues) and includes postage and packaging. If the magazine ordered changes frequency per annum, we will honour the number of issues paid for, not the term of the subscription. Direct Debit offer is available to UK subscribers only. Credit/debit card charges will be taken in sterling. This offer is subject to a minimum term of 12 months. Cancellations are not permitted until the end of this initial period and we will not issue you a refund. Should you wish to cancel after the minimum term, please contact our customer care team. For enquiries and overseas rates contact magazinesdirect@quadrantsubs.com or call +44 (0) 330 333 0233. *The digital version comes free with the print edition of your subscription and is available strictly on a trial basis. Time Inc. (UK) Ltd reserves the right to withdraw free access to the digital version at any time. The Rewards scheme is available for all active print subscribers of magazines published by Time Inc. (UK) Ltd, free of charge. Digital subscribers also get access as long as the subscription has been purchased directly through the publishers at magazinesdirect.com. Full terms and conditions are available at mymagazinesdirect.com. What Digital Camera, published by Time Inc. (UK) Ltd, will collect your personal information to process your order. What Digital Camera and Time Inc. (UK) Ltd would like to contact you by post or telephone to promote and ask your opinion on our magazines and services. Please tick here if you prefer not to hear from Time Inc. (UK) Ltd. Time Inc. (UK) Ltd may occasionally pass your details to carefully selected organisations so that they can contact you by telephone or post with regards to promoting and researching their products and services. Please tick here if you prefer not to be contacted. Time Inc. (UK) Ltd who publish What Digital Camera would like to send messages to your mobile with offers from carefully selected organisations and brands, promoting and researching their products and services. If you want to receive messages please tick here.

3. Pay only £16.49 every 6 months by Direct Debit (UK only)

Instruction to your Bank or Building Society to pay by Direct Debit. For office use only. Originator's reference - 764 221



Name of Bank:

Address:

Postcode:

Account Name:

Sort Code:

Account No:

Please pay Time Inc. (UK) Ltd. Direct Debits from the account detailed on this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain valid with Time Inc. (UK) Ltd. and if so, details will be passed electronically to my Bank or Building Society.

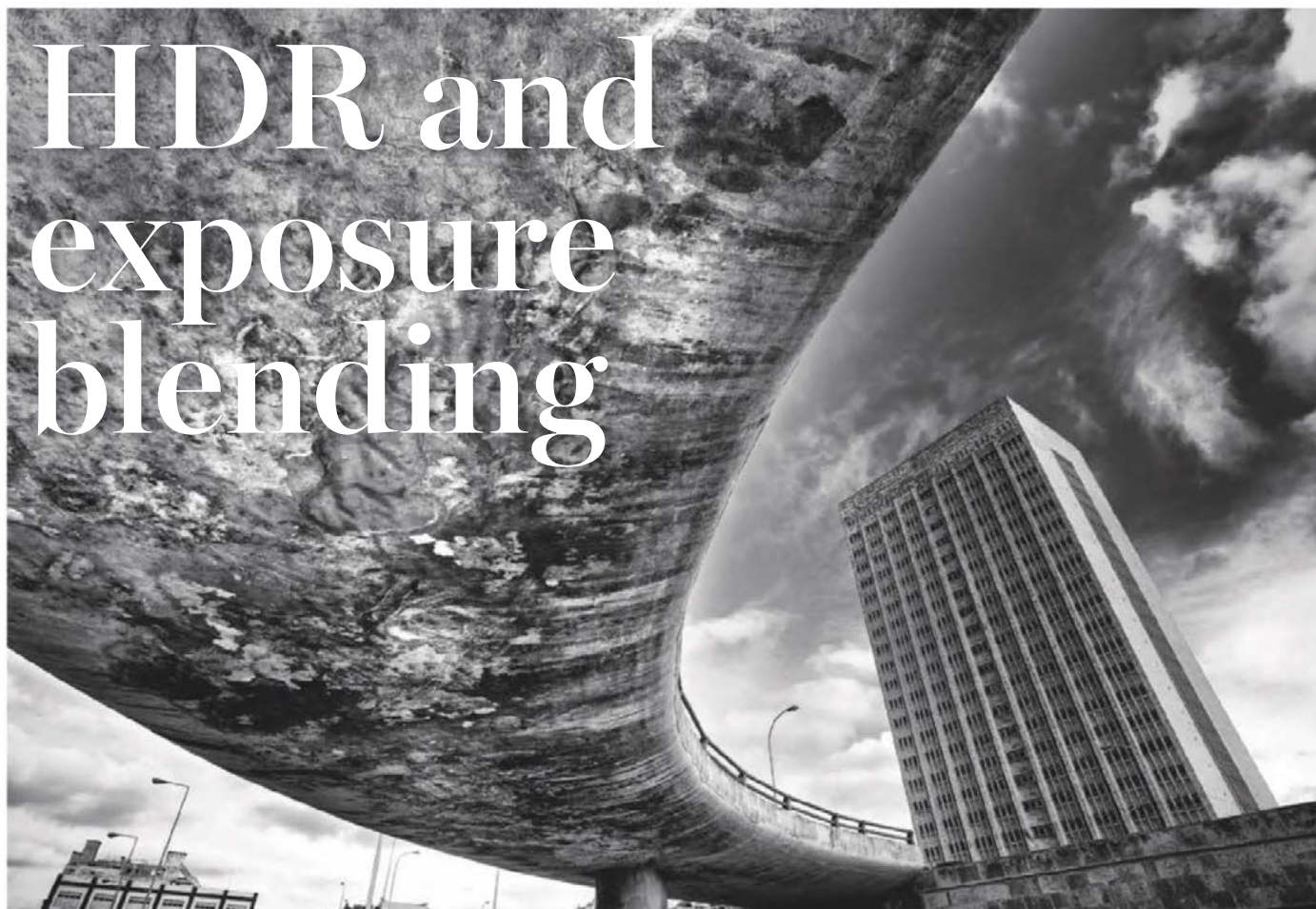
Signature:

(I am over 18)

Date:

CODE: 13A

HDR and exposure blending



Contrast may be the photographer's worst enemy, but in this digital age there is a solution, says **Lee Frost**

We've already established on page 23 that the brightness/dynamic range of a digital sensor has its limits, and that once contrast goes beyond these limits something has to give – either you hold detail in the highlights and let the shadows 'block up' or you expose to record detail in the shadows and let the highlight 'blow out'.

There is a solution: all you do is combine a series of images of a scene or subject shot at different exposures to produce a composite image with increased brightness range.

The first way to do this is using a technique known as high dynamic range (HDR). HDR is considered by many to be a gimmicky special effect that produces unreal, unnatural images, so it tends to have a poor reputation among serious photographers. However, it doesn't have to be an over-the-top effect, as it can produce some great results.

The 'proper' way to generate the images for an HDR merge is to shoot a series of frames at different exposures (see page 53). However, it's also possible to create 'pseudo' HDR images by taking a single raw file and processing it several times in your raw processor, and then adjusting the exposure for each one so you have a sequence of bracketed images. I often use this process for travel portraits as it's difficult to take a sequence of images of a person without there being movement between frames, even if it's just the blinking of an eye. Using HDR on portraits emphasises detail in the subject's face, revealing every wrinkle, pimple and strand of hair. The results could never be described as flattering, but they look amazing.

However, to create HDR images you need suitable

Above: HDR creates surreal effects



Right: You can use HDR on portraits, too

software. Recent versions of Adobe Photoshop have an HDR option (File>Auto>Merge to HDR). However, I have never found this to be particularly effective and instead prefer to use the third-party application Photomatix Pro (www.hdrsoft.com). The latest 4.1 version costs \$99 (around £61) to download and licence, and is available for both Mac and Windows. There's also a slimmed-down version called Photomatix Essentials 3.0 (formerly Photomatix Light) that costs just \$39 (around £24) and is aimed at newcomers to HDR, plus a plug-in for Aperture priced \$79 (around £49). Another option is Nik Software HDR Efex Pro. This costs \$159.95 (around £140) and is available for Mac and Windows (www.niksoftware.com).

If you Google HDR software, other options will come up, some of them free, but these two are the most sophisticated.

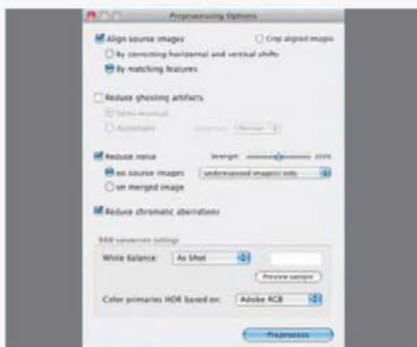
Lee Frost shows you an easy **step-by-step** guide for HDR

Here's a step-by-step to creating an HDR image using Photomatix Pro



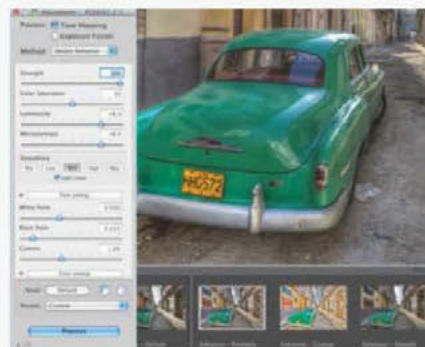
1 SELECT FILES

Launch Photomatix Pro and click on Load Bracketed Photos at the top of the Workflow Shortcuts box. Drag and drop the files you want to combine into the box that appears, or use the Browse option to find and select the relevant files. Click OK.



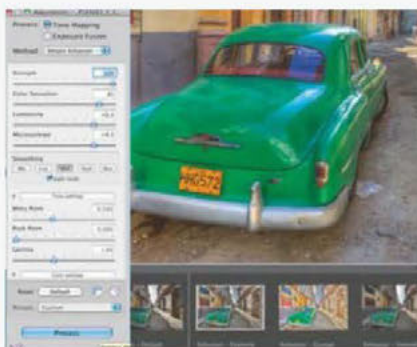
2 PREPROCESS IMAGES

A dialogue box appears titled Preprocessing Options and has various check boxes and sliders. I just leave this in its default state of Align Source Images, Reduce Noise, Reduce Chromatic Aberrations and so on, and then click Preprocess.



3 TONE MAPPING

It usually takes 30-60 seconds to combine the exposures. A tone-mapped image then appears along with sample images created using presets within Photomatix Pro.



4 CHOOSE YOUR PRESET

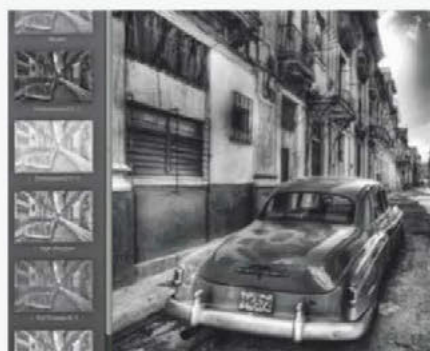
There is an Enhancer-B&W preset worth trying, although I find that it rarely gives a satisfactory result. In this image I found that the Enhancer-Painterly gave the best HDR effect.

5 FINE-TUNING

Having chosen the best preset, you can then fine-tune the effect using the sliders in the toolbox to the left of the preview image. Adjustments are quite subtle, but it's definitely worth getting to know how these controls affect the image.

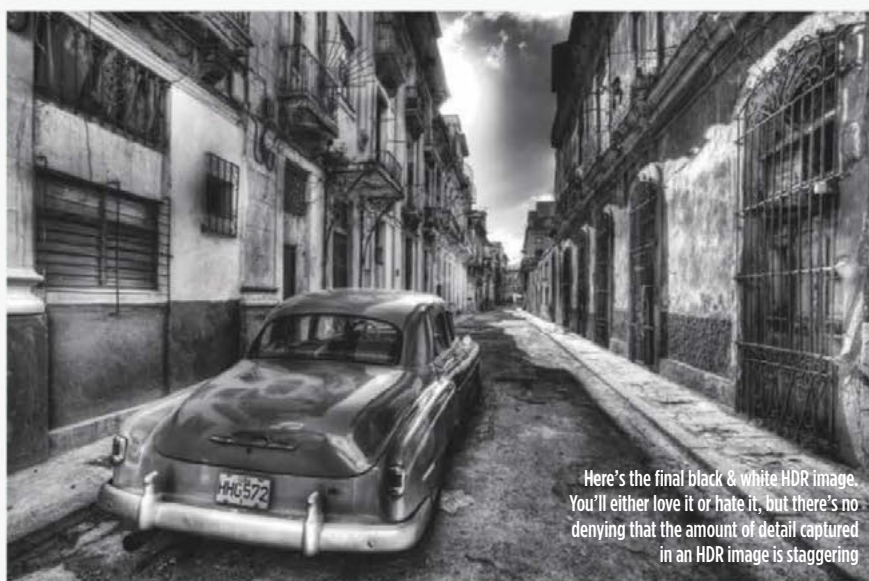
6 SAVE AND RENAME

Once the Tone Mapping has been applied to the image, save it as a 16-bit TIFF file, re-name it and then choose a location where it can be saved to. Now open the image in Photoshop.



7 CONVERT TO MONO

Convert the image to black & white. You can do this using any method you choose, although here I relied on Nik Software Silver Efex Pro, adding extra drama using the High Structure preset.



Here's the final black & white HDR image. You'll either love it or hate it, but there's no denying that the amount of detail captured in an HDR image is staggering

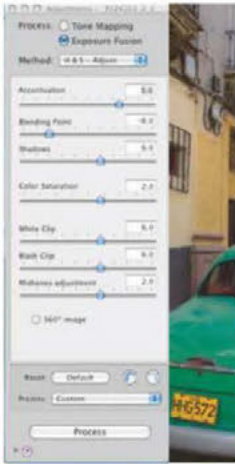
Exposure fusion

If HDR seems too surreal for you, or you simply can't get the look you're after, try exposure fusion. This assigns weights to the pixels of each image in the sequence according to luminosity, saturation and contrast, and then, depending on these weights, includes or excludes them from the final image. So it takes the best bits from each image, combining them seamlessly to create a 'fused' image.

Exposure fusion is handy when shooting urban scenes, where often all you see is a 'V' of sky, with buildings rising on either side of the frame to the top corners of the image. Use an ND grad to tone down the sky and you also end up darkening the tops of the buildings. It may be possible to select the darkened parts of the building in post-production and lighten them, but this rarely looks convincing so it's better to shoot a sequence of exposures and combine them.

The end result is far more subtle than HDR, although exactly the same software is used. In this case I used Photomatix Pro 4.0.2 again, and the same set of raw files as for HDR so you can make a direct comparison between HDR and exposure fusion.

Creating the final composite image follows the same process of dragging and dropping the raw files into Photomatix Pro. However, when the preview image and presets appear, click on Exposure Fusion at the top of the toolbox window instead of Tone Mapping so a different set of sliders appear, then choose one of the Fusion presets from the options below the preview image. In this case I found that fusion-adjusted gave the best effect. Then, after a few tweaks with the sliders, it was job done.



This is the best I could achieve when shooting the street scene in a single frame. As you can see, the car is too dark and the sky is blown out. I could rescue the car in Photoshop, but there's no detail in the sky to retrieve as contrast was so high



Here's the final 'fused' image. As you can see, the effect is much more subtle and realistic than HDR, but the dynamic range of the composite image is enormous compared to that of a single exposure



CREATING YOUR SEQUENCE OF EXPOSURES

Ideally, you should mount your camera on a tripod when shooting exposure sequences for HDR and fusion so it doesn't move between frames, otherwise the images may not line up correctly when you combine them. The exposure increments you use depend on how contrasty the scene is. I tend to shoot -2, -1, metered, +1 and +2 stops, although if the scene is very contrasty, as it was for the street scene used here, I may bracket from -3 to

+3 stops in full-stop increments so I end up with a sequence of seven images. I normally shoot in aperture priority exposure mode and adjust the exposure between frames using the camera's exposure compensation facility. However, it is quicker to use your autoexposure bracketing, or to create a custom function specifically for shooting exposure sequences.

**500
LINES
IN STOCK**

ACCESSORIES

- Adaptors and rings
- Caps and Hoods
- Cable releases
- Flash
- Camera
- Support
- Straps and
- Cases
- Camera Care items
- Spirit Levels
- Eye piece and screen items
- CD items
- Card readers
- Miscellanea



**82
LINES
IN STOCK**

BATTERIES

- Alkaline
- Lithium
- PX nos
- Watch



**213
LINES
IN STOCK**

STEPPING RINGS

- Very Slim. Male Thread always first number (fits camera lens)
- Female thread Second. So 52-55mm is a step up ring, 55-52mm is a step down ring



**781
LINES
IN STOCK**

FILTERS

- KOOD Slot Filters and Systems - Huge Range in A, P, Z/ 100mm, 4", and 4" x 4 x 5.6" sizes
- Screw on round optical glass filters, huge range all sizes
- Blue and Green water underwater Filters



**77
LINES
IN STOCK**

ACTION CAMERA FITTINGS



DARKROOM

**44
LINES
IN STOCK**

- Tanks
- Thermometers
- Containers
- Measures
- Dishes
- Tongs
- Film Clips
- Changing Bags
- Aprons



**53
LINES
IN STOCK**

STUDIO

- Background paper rigs
- Light Stands
- Tents - Cube Light
- Flat Pack Studio
- Reflectors
- Umbrellas
- Accessories



**50
LINES
IN STOCK**

VIDEO

- RIGS
- Cages
- Steady
- Camera
- Matte Boxes
- Follow Focus
- Dollies
- Sliders
- Accessories
- Electrical Pan and Tilt



**54
LINES
IN STOCK**

SCRAPBOOK

- Large range of acid free adhesive items
- Corners
- Double sided fixers
- Dispensers



CAN BE ORDERED FROM ANY INDEPENDENT RETAILER

KOOD

KOOD International Limited, Unit 6, Wellington Road, London Colney AL2 1EY

Tel: 01727 823812 Fax: 01727 823336

E-mail: info@koodinternational.com / koodinternational@gmail.com

www.koodinternational.com

KOOD BRAND PRODUCTS ARE EXPORTED TO PHOTO TRADERS WORLDWIDE

The key to creative lighting

Phil Hall reveals the two basic portrait lighting techniques that should be in everyone's armoury

Black & white portraits can have a classic quality that's hard to match with colour. Here, we look at how to create two timeless portrait lighting set-ups that are perfect for mono photography.

Studio lighting needn't cost the earth – a budget kit can be had for less than £400 – while flashguns and the wealth of accessories available are ideal for simple lighting set-ups.

While in the days of film, studio lighting may have been a bit of a dark art, striking studio portraits are incredibly easy to achieve with digital. As you can see your results instantly, you can review and adjust the exposure, as well as move and fine-tune your lighting to ensure you achieve the look you're after.

While it's always enjoyable to experiment with your own lighting set-ups, there are a couple of effective but simple techniques you should try that give very different results. Known as high-key and low-key lighting, these two techniques generally utilise a white and black background respectively, and are particularly eye-catching in black & white. Turn over the page to find out how to set them up...

High-key lighting offers a clean and crisp look to your mono images

HIGH-KEY LIGHTING

If you're after a clean and bright look to your shots, high-key lighting is the way to go. While you will find that there is some debate about what is classed as a high-key portrait, in essence the image is made up of largely light tones and is particularly suited to subjects where you want to convey an airy mood.

Because you are shooting at the lighter end of the scale, skin tones are often overexposed and imperfections can disappear, placing emphasis on the eyes – the key element of any portrait. High-key images are popular among high-street portrait photographers, lifestyle photographers and fashion photographers, who are after a crisp, uncluttered look to their pictures.

While some photographers can use four or more lights to achieve a high-key shot, it's still possible with just a couple of heads from a studio lighting kit.



Using additional lights can enhance the effect

This simple lighting set-up is easy to achieve



1 MAIN LIGHT

First, set up your main light so it is positioned just above your model's head. A softbox is best for producing a nice even distribution of light in this instance, but if you only have a brolly, use that instead. Next, position your second flash head behind your model and point it towards the backdrop.



2 SECOND LIGHT

Instead of using a softbox, use a spill kill reflector on your second light. Set it lower than your main light, at an angle and positioned quite close to the background. This should provide enough 'kick' to illuminate it evenly. Start by setting the power on both lights to 1-2 stops above minimum.



3 POSITION A REFLECTOR

Position a plain white reflector or polyboard opposite the softbox, as this will allow you to bounce light back onto the subject for a more evenly lit result. Now it's time to shoot, with your camera set to manual, using an aperture of f/11, a shutter speed of 1/160sec and an ISO of 100.



LOW-KEY LIGHTING

While high-key lighting is perfect for nice, fresh portraits, you may want your pictures to convey a more dramatic, mysterious mood than high-key lighting produces. In low-key lighting, out go the bright-white backgrounds, which are replaced with darker backdrops and lower-powered lighting that can be achieved with a single light source. Results can be impressive, with a single light picking out features on your subject from the dark shadows.

When shooting low-key portraits, the thing to remember is that you need to take a more considered approach than you would with a high-key shot, as your light needs to be positioned so that it falls on the model very precisely. Subtle changes in position can make a huge difference to the result. It's worth also bearing in mind that this kind of lighting is far less flattering than its high-key counterpart, showing up more flaws in the skin. Because of this, it may seem logical to use it only with a younger subject, but don't be fooled, as low-key lighting is great for subjects where you want to emphasise their facial characteristics and detail.

To produce this effect you'll need a dark backdrop, and while dedicated rolls of black paper such as Colorama are popular, a dark/black sheet set-up behind your subject will do an excellent job of absorbing any stray light and be just as effective.

Finally, get your subject to wear a dark top so he or she blends into the background and the light just brings out their face. Follow the steps below to see how it's done.



Low-key lighting conveys more mood in the shot

1 POSITION LIGHT

Set up your main light so it's positioned to the left and just above your subject, with a softbox mounted on it facing your black backdrop. You'll need to turn down your light to at least half power. As an alternative to a softbox and a more direct light, attach a snoot and angle it towards your subject.



2 BRING IN YOUR SUBJECT

Bring in your subject and position him or her at the edge of the light, so that it glances across them. This will produce a nice soft light from the spill of the softbox. Because the softbox isn't pointed directly at your subject, it will highlight only certain areas of your subject, leaving the rest in shadow.



3 CAMERA SET-UP

Set your camera to manual mode, dialling in an aperture of f/8 and a shutter speed of 1/125sec at ISO 100. With the sync lead/trigger attached, fire a test shot. If it's too bright, reduce the power of the flash, or stop-down the lens further to f/11. You may find you have to reposition your subject, too.





KT LIST



LIGHTING

❑ Spotlights with Fresnel lenses are best. Fresnel lenses achieve the magnification of a much thicker lens without the weight. The lens rear is stippled to give the light a super-smooth, soft-edged fall-off.



FILTERS

❑ I use a Tiffen Black Pro-Mist filter with quarter strength to give a subtle diffused look to my Hollywood images. An old lens from the 1950s or '60s used via an adapter can also work well.



Hollywood glamour

Recreate the golden age of Hollywood with our lighting guide. Lighting expert **Damien Lovegrove** explains how

Using curtains as a background and a pair of Lupolux LED 650s gives model Carla Monaco that classic film-star look. Note the vintage neckline to her dress and the curls in her hair. Her right cheekbone is emphasised with a strong shadow created by using a 'down-the-nose' key light

The classic photographs of Hollywood's golden age conjure up visions of fantasy, romance and perfection – and these evocative images are still in great demand today. Establishments like Studio Harcourt in Paris, France, which was set up in the 1930s, have met this demand and continue to do so.

In this feature I'll share the skills, formulas and style traits you need to light the Hollywood way. I learnt these from a retired lighting director when I was undergoing my lighting training at the BBC in the early 1990s.

I'm often asked what makes a portrait 'Hollywood' in style. The answer is the finely controlled use of hard light from Fresnel spotlights, a narrow depth of field and a high-quality monochrome print. Vintage Hollywood also needs the right hair, make-up and styling to complete the look.

THE PERFECT LIGHTING

This Hollywood system works well on location as well, and with the right lighting any location can look like a film set. A unique characteristic that makes Hollywood lighting so special is the use of traditional spotlights with Fresnel lenses and barn doors. These luminaires produce a crisp, hard light that is controllable using a flood/spot system and by the shaping of the barn doors. The look needs Fresnel lens lights for authenticity and it's easy to spot the classic lighting style of the past masters when lit

I used a single Arri 300 junior for this shot of model Lora Brisland. A silk tie was fashioned into a hair band and vintage false eyelashes complete the look



SCATTERGEL

■ I use a ScatterGel or other gobo (go between) to break up the light to create mood and ambience. This simple piece of kit can really deliver the icing on the cake in terms of lighting.



BARN DOORS

■ Barn doors on back lights stop the chance of flare and help keep the image shadows under control. Barn doors on the key light keep the spill light off the background.



REFLECTOR

■ A reflector just out of shot from the side is great for controlling contrast. I use an original Triflector I bought way back in the 1990s. It works well from the sides and underneath.

ON A BUDGET

If you can't afford the HMI or LED Fresnel spotlights from Lupolux, tungsten Fresnel spotlights are still available from Arri and cost less than a Canon Speedlite or Nikon Speedlight. I recommend the 650, 300 and 150 in the junior series. Flashlights with grids can get you 90% of the look, but without modelling lights they can be hard to set up and rely on test and measure to achieve a good power balance. Studio lights are a better option if you want to try to achieve this look with flash because they have modelling lights – but you might not be able to achieve f/1.4 even with the flash set to minimum power. There are expensive Fresnel adapters available for studio flash systems, but they don't have the control and versatility of a dedicated light. I'd say use the cheaper 18cm reflectors instead fitted with 20° honeycomb grids to get near the look you want. Set the flash power to minimum on your most powerful unit and balance the power of the other units to taste.

Using flash will create a darker shooting environment because the modelling lights are a fraction of the power of continuous lights, so take care when focusing.



This model is lit with a classic two-light tungsten set-up, with the Arri 300 as a key light to the left of the camera and the Arri 150 as a back light on a boom arm. The bedside light gives the motivation for the back light and sets the base exposure

with these luminaires. Five years ago LED Fresnel spotlights weren't even dreamed of. However, now they have largely replaced HMI and the hot tungsten lights of old. Lupolux LED spotlights are now available with bi-coloured LEDs so they have an adjustable colour temperature from 3,200K to 5,600K.

The LED revolution is exciting for stills photographers because we can tap into the kind of lighting that was once the reserve of film crews with mega budgets.

THREE INTO TWO

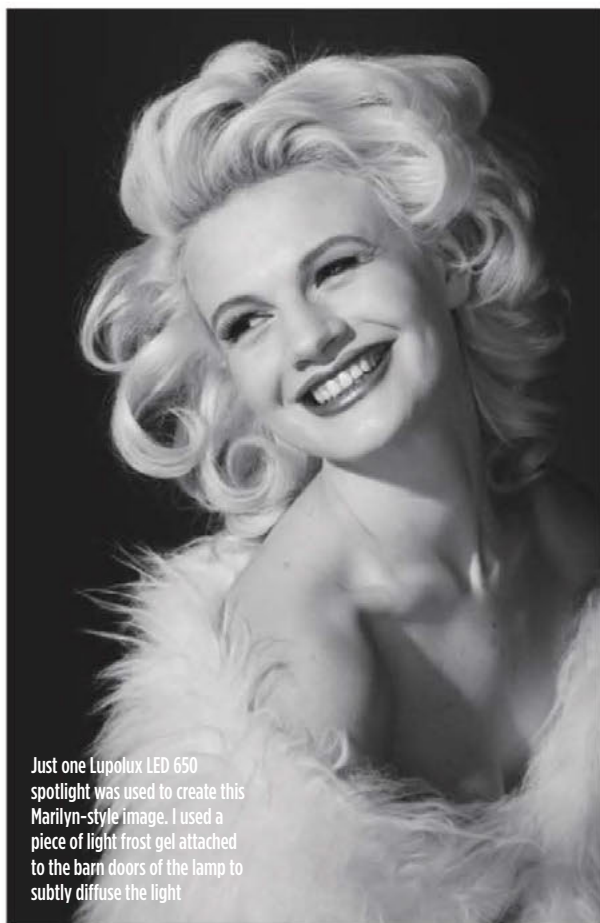
Old Hollywood faced the problem of making the three dimensions of real life look good in two dimensions. This was achieved by separating the foreground and background using tones. Subjects closer to the camera were, and still are, lit to a higher contrast than the environment they are in. Pretty much every shot of an actor in a high-budget film or TV drama has a back, rim or kick light. These all give the artist a presence in the scene and separate them from the background. Landscape and portrait painters use the same trick. The most distant parts of the scene have the lowest contrast and black is shown as grey.

The steepness of a key light is determined by the subject's eyes. Deep-set eyes or ones with false eyelashes need a shallower key light. This ensures a lovely highlight. Shallow-set eyes can get away with high, steep key lights. The steeper the light is, the more chiselled the face becomes with clearly defined cheekbones and jaw lines. So rig your key light as high as you can, while retaining a highlight in each eye.

Shadows are your friend. Shadows reveal shape, and the crispness of a shadow edge is determined by the relative size of the light source. I like to create dark shadows that still have significant detail. The quality of the final print will be governed by the control of the deep shadow detail. Never let it become a black hole.







Just one Lupolux LED 650 spotlight was used to create this Marilyn-style image. I used a piece of light frost gel attached to the barn doors of the lamp to subtly diffuse the light

■ LENS CHOICE

A medium telephoto or a standard lens is best for these kinds of shots. For a big wide scene I might use the moderately wide 23mm lens on my Fujifilm X-T1 set to f/1.4, which equates to a 35mm lens on a full-frame DSLR. The trick is not to get too close. If you're more than touching distance from your subject, you'll be fine.

If I'm shooting a vintage look, I pop some Ella Fitzgerald or Etta James on the hi-fi in the studio. This helps to set the mood and for that energy to come through in the photograph.

Hollywood is not all about the past, though, as there is a new genre taking hold among social photographers that fuses classic Hollywood lighting with modern fashion



This picture of Lora exhibits the dreamy qualities of using a Tiffen Black Pro-Mist filter and shallow depth of field. The key to this shot's success is the intensity of our interaction

styles. The crisp light from these spotlights closely resembles natural sunlight and makes skin come alive. Hard light has been rediscovered by advertisers. On the downside, hard light can emphasise skin surface blemishes, but that's what Photoshop's for, isn't it? Crisp, beautiful, hard light energises photos and takes them to a level of fantasy.

STEP BY STEP

Here's how you get the look – by getting it right in-camera. Don't rely on post-production to achieve magic. Lighting control is the key, so set your camera up first to show exactly what you need to see. Switch the LCD or EVF to black & white and the screen brightness to manual in the middle position. This will give you a preview of what lighting changes you're making. You can use a tripod too, and I find it helps my fine-tuning of the shot. It also helps as I go back and forth, contrasting and comparing the subtle lighting changes made between shots. I share the images on the back of the camera with my sitter no matter if they are a client, a model or a celebrity. This kind of shoot is a joint venture and often the sitter suggests changes to the styling or expression that ultimately make the shot a success.



1 FRAME YOUR SHOT

Set the mood with the camera position. Shoot from below the eyeline to make someone seem powerful, statuesque, strong and confident. If you want a softer, more vulnerable look, choose a high viewpoint and photograph them from above.



2 SET LIGHTING

Carefully set your key light. Always light from above and aim the key light either 'straight down the nose' or just off to one side so that the nose shadow touches the cheek shadow to create a 'Hollywood triangle'. Use the barn doors to control any spill.



Notice how hard light narrows the model's face. It falls away around the sides, giving a more slender look. Soft light by comparison widens faces and flattens texture. The rim lighting for this shot comes from an Arri 150 light on a boom arm. The boom arm allows me to place the stand out of the shot to the right of frame. Claudia, my make-up and hair artist, created the look with classic hair curls and well-defined eyes

GLOSSARY

BARN DOORS The metal flaps on a light fixture that are used to control spill or to create a rectangular-shaped light pattern.

SCATTERGELS A screen-printed acrylic sheet with regular or irregular patterns used to break up the light and create a dappled effect.

FRESNEL The name of the man who a compact lens made up of concentric rings is named after. These lenses are often found in lighthouses, on the front of flashlights, and in film and TV luminaires.

LUMINAIRE The posh term for a continuous lighting fixture.

KICK LIGHT A kick light glances the cheek of the subject from behind and to the side. It creates a light band, often blown out to white from the specular reflections off the skin.

BACK LIGHT A back light is rigged on the opposite side of the subject to the camera, irrespective of which direction the subject is facing.

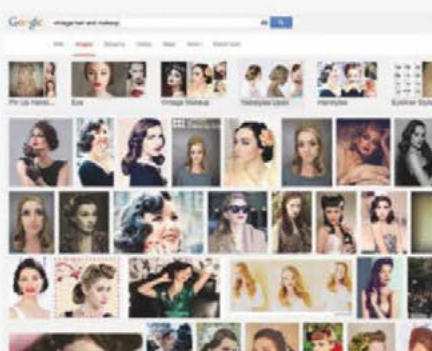
KEY LIGHT The key light is the principal light and it doesn't necessarily have to come from the front – it can land on the subject from any angle.

DOWN THE NOSE This refers to the direction of a light. If the subject's nose was very long it'd touch the lighting stand if a 'down-the-nose' lighting direction was used.



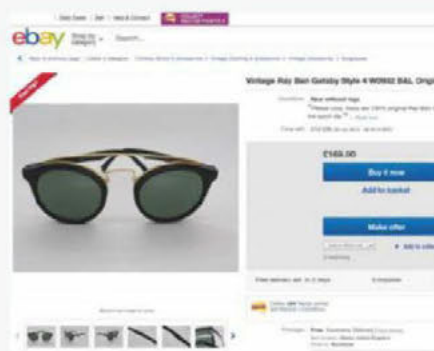
3 ADD BACK LIGHT

Add a back light or kicker to make the image three-dimensional and to help separate the foreground from the background. Use a reflector in the spill from the key light to control the contrast in the scene, and then light the background as required.



4 MAKE-UP

If you're going for an authentic vintage look, make-up and hairstyles are really important. Curls and lashes can take ages to get right, so allow plenty of prep time for your shoot. I research vintage hair and make-up styles using Google images.



5 STYLING

Get the styling right, as this is a huge part of the look too. An evening dress makes a good base. I often add a white shrug that I bought in Top Shop, some pearls I bought in Primark and vintage-style sunglasses purchased on eBay – all cheap finds that work really well.



A very ordinary building just off Bothwell Street in Glasgow. However, when viewed from just the right angle, the building takes on some interesting qualities

Master of mono

Billy Currie reveals the creative process behind his award-winning black & white architectural images

Once I had got over the initial beginners' hurdles of photography, I decided I wanted to create a wide and varied collection of images – something more than a single-style portfolio. I felt it was important to become a well-rounded photographer who could ply his art regardless of situation, style or environment. I hoped it would ensure my photography would stay fresh, challenging and, above all, interesting.

As my journey continued, I veered more and more towards black & white. While it wasn't a conscious decision, the skew became increasingly obvious as time went on. This pull towards monochrome has never left me, and currently approximately 70% of my photographs are mono in one form or another. Black & white images, for me, contain a purity that their colour counterparts can never possess. They are timeless and they look beautiful among any surroundings. In my opinion, the same cannot be said for colour.

From a purely post-production point of view, and as

KIT LIST



TILT-SHIFT LENS

Distortion is a major factor when photographing architecture. A tilt-and-shift lens can virtually eliminate this, meaning far less work in post-production.

REMOTE RELEASE

This is crucial for long exposures. I use a Hähnel Giga T Pro II, which provides me with many options, from basic remote release to wireless timer to intervalometer, to name but a few.



GEARED HEAD

Lining up an electronic spirit level with a ball head is quite difficult. A geared head such as the Arca-Swiss D4 makes this an easy task.



L BRACKET

When shooting in portrait mode, your camera and tripod are substantially less stable. I always use an L bracket to ensure my camera stays above the centre of my tripod.



■ strange as it seems, a colourless image is much more of a blank canvas than colour could ever be. Take, for example, contrast, which is the most important tool I have at my disposal. In monochrome, contrast can take you from light and airy to the depths of dark and moody, retaining its beauty at all times. Because of colour shifts and saturation, colour images are far more constrained, and can quickly become unattractive cartoons. Mono lends itself much more freely to the creative photographer.

INSPIRATION

Although my portfolio was varied and already contained many mono images, one style that didn't feature in it was architecture. It was a subject that I had never viewed in an interesting light, metaphorically speaking. And then, it happened... I came across a selection of architectural images from Dutch photographer Joel Tjintelaar. They were like nothing I had ever seen previously in architecture: artistic, eye-catching and, above all, in beautiful black & white.

I already had a good knowledge of Photoshop, and I knew that mastering it would be the key to producing artistic images such as Joel's. After reading a few blogs and watching one of Joel's videos, the next step was obvious: learn the relevant Photoshop tools required for this discipline. I knew it would be quite different from anything I'd done previously with my landscape and nature work. Buildings have strong, defined edges, curves, panels and even surfaces. It stands to reason that they require a new set of post-production skills.

Capturing an architectural image is pretty much the same as for any other long-exposure shot. The only slight difference may be the length of the exposure. I don't have a standard setting for shutter speed; it solely depends on how fast the clouds are moving and how far I want them to travel across my frame. If the clouds are moving slowly, I may shoot a much longer exposure – anything up to 12mins is not unusual.

FRAMING

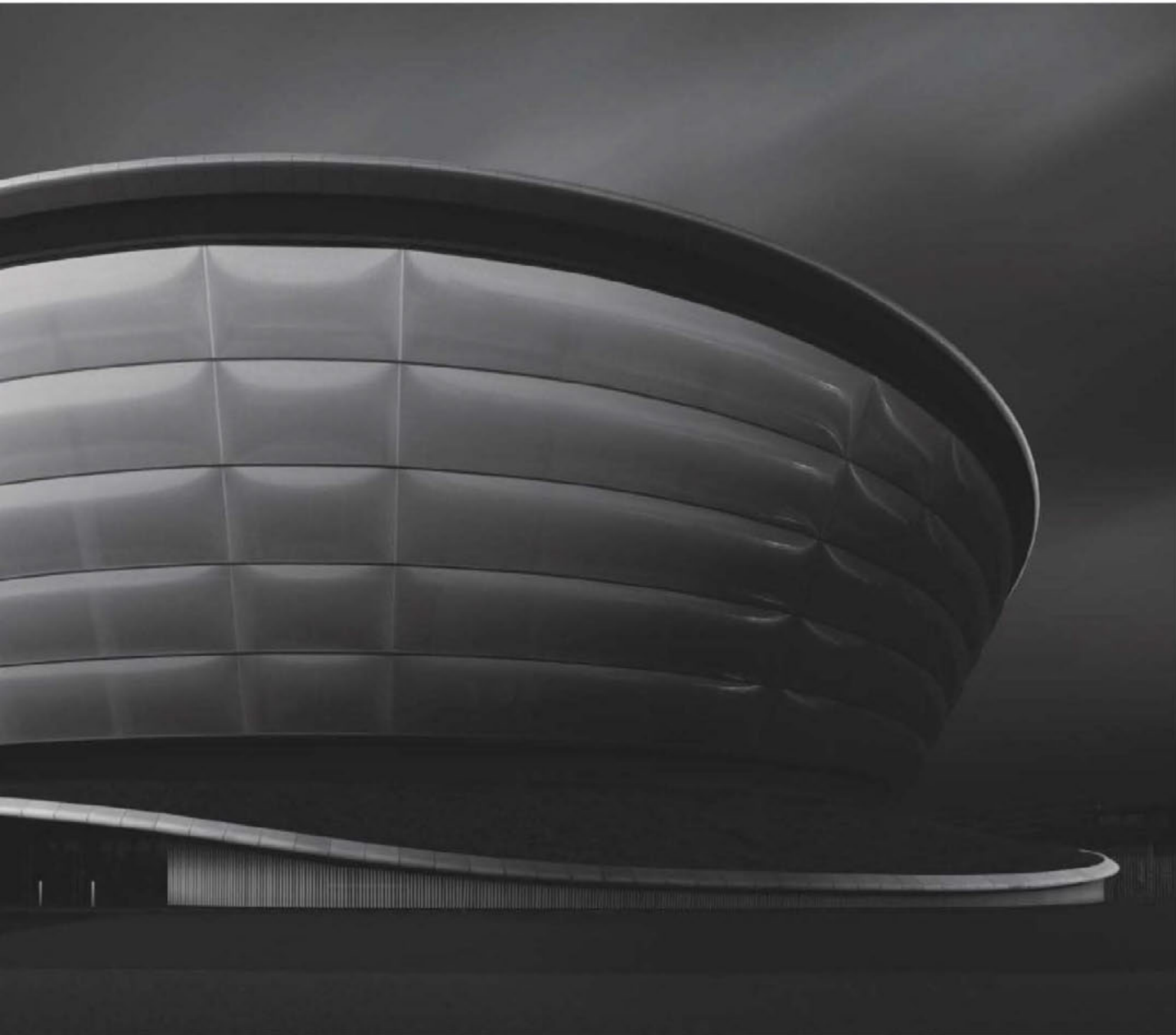
The beauty of combining architecture and monochrome is that both free you up, compositionally speaking. There are no foregrounds to worry about, no rule of thirds or any other preconceived ideas of what makes a nice landscape. ■

The Hydro, Glasgow's newest venue, which sits close to the river Clyde near the city centre



The impressive skyline of London's financial district





BEFORE AND AFTER

There is no doubt that post-processing, whether in the darkroom or on a computer, is one of the most important and complex aspects of photography – even more so with this artistic style of architecture. It is critical that the original image is captured with as much information as possible, but even then, this only provides a good starting point. Next comes what I consider to be the ‘art’ in the ‘art of photography’: the creation of your vision through technical post-processing techniques, which is often much more difficult and complex than anything you can find on your camera. This is a very personal stage, where your image becomes unique and takes on your individual vision, be that true to the original scene or as far removed from it as your imagination allows.





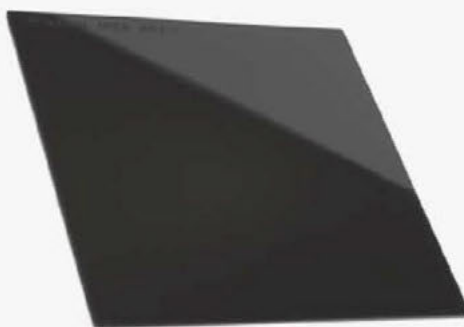
Paisley Mill, a very traditional old building near Glasgow

TOP TIPS



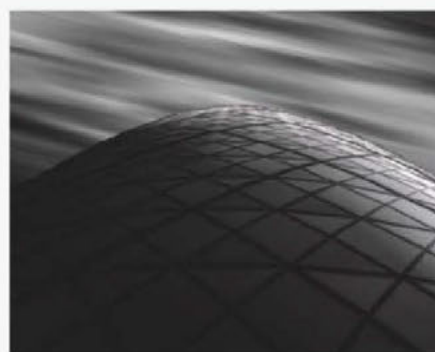
COMPUTER POWER

Working with large documents in Photoshop can lead to severe performance degradation. If you already have sufficient RAM, installing a small SSD drive for Photoshop to use as a scratch disk can make a substantial difference. It can even eliminate the need for a new PC.



FILTERS

To be able to expose for any duration in any light while still using optimal camera settings, the best combination of filters are 3, 6 and 10 stops. As filters can be stacked, these enable you to have 3, 6, 9, 10, 13, 16 or 19EV of light reduction.

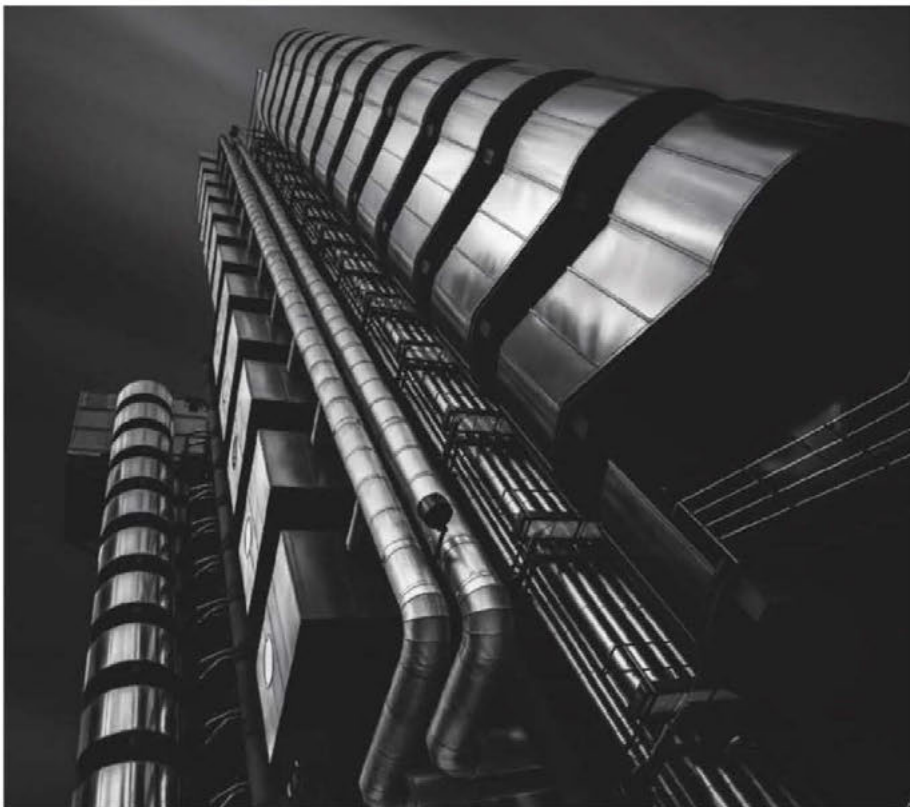


SKY

With architectural images of this style, I think it is important that the sky should complement the structure rather than detract from it. The image is an artistic interpretation of the building through the use of light and shadow; the sky could easily reduce the overall impact.

BAD WEATHER

For me, architecture is by far the most rewarding of all the genres of photography. Unlike many others, it is not as reliant on weather, flattering light or time of day. The building or structure is 100 per cent of the image; it needs neither foreground nor colour in the sky. Simply make a good exposure with optimal settings and the camera's job is complete – light, shadow and mood can all be taken care of later. For these reasons, architecture can still yield many keepers in weather that would prove unsuitable for most other types of outdoor photography. I can't recall an architectural shoot to date that didn't produce at least several usable images, which is not something that can be said for most photographic subjects.



While the light might not be great for colour, it's perfect for shooting mono

With mono architecture, it doesn't matter if you shoot part of a building, the whole building or a whole skyline of buildings. It is the shadows and contrast and drama that make the photograph, not just the subject.

Once back home, that's when the real work begins. It can take anything from an hour up to several hours to produce an individual image, depending on what's involved. I don't use any plug-ins; everything is completed in the core Lightroom and Photoshop programs.

Although they can be time-consuming and repetitive, the processing techniques are actually relatively simple – although a thorough understanding of basic Photoshop tools is a must. You need to be comfortable with aspects such as selections, organising layers, dodging and burning, applying gradients, and so on, as these provide you with everything you need for most images.

When processing a monochrome architectural image, my starting point is usually a basic black & white conversion that's been carried out in either Lightroom or Photoshop. Once this is complete, I then take a look at the exposure and adjust it to create the overall atmosphere that I'm hoping to achieve. The sky and how it interacts with the building or buildings is vitally important to all my images, so the next step is to make an accurate selection, where further adjustments to contrast are applied, along with gradients.

The next step is the really painstaking part of the process. If I'm working on a single building, I make selections of every face, window and piece of trim – I then simply dodge and burn each of these in turn until I have my desired effect. If I'm working on a skyline, I make individual selections of every building. When this is done, I finish the image by making some global adjustments to really fine-tune the atmosphere.

One of the most important points to note about this whole process is that the deep shadows and eye-catching highlights can never come from the black & white conversion alone. They come from working on the many individual selections and transforming each of them into interesting areas in their own right.



NOISE REDUCTION

It is a common belief that long-exposure noise reduction is used to remove hot pixels, but this is not the case. The purpose of this in-camera setting is to remove or reduce 'fixed pattern noise' – something that is near impossible to do well in post-production.



CHECK FOR DUST

On completion of an image, it should be inspected at more than 100 per cent. This allows for the identification and removal of any unwanted artefacts, such as dust spots or chromatic aberration. An image should be flawless regardless of its size.

WHAT DIGITAL Camera

**MONTHLY EXTRAS,
EXCLUSIVE TO SUBSCRIBERS**

Rewards



50% OFF food or **2 FOR 1** meals
at thousands of UK restaurants
with a **FREE 60 day**
Gourmet Society
membership



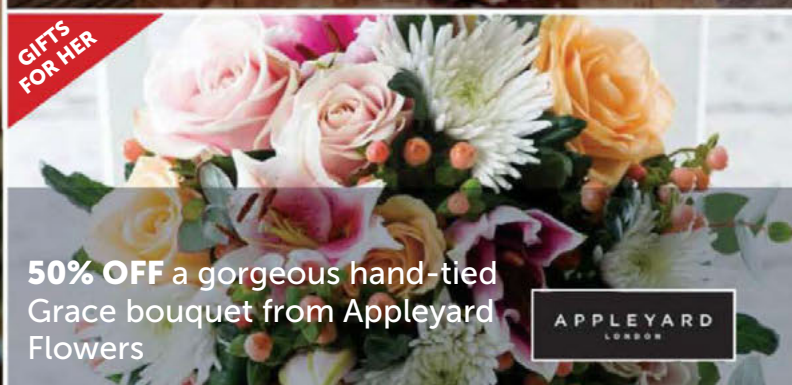
FREE £5 voucher to spend
online at PhotoBox

photobox



50% OFF a traditional steak
selection box from Donald
Russell with **FREE** delivery

DONALD RUSSELL
Real food, real flowers, every day



**GIFTS
FOR HER**

50% OFF a gorgeous hand-tied
Grace bouquet from Appleyard
Flowers

APPLEYARD
LONDON

Plus

WIN the latest robot vacuum cleaner, the iRobot Roomba 980,
worth **£899**

iRobot

**This month, be sure to log in to Rewards to access the above offers and you'll
find even more online – all EXCLUSIVE and FREE to magazine subscribers.**

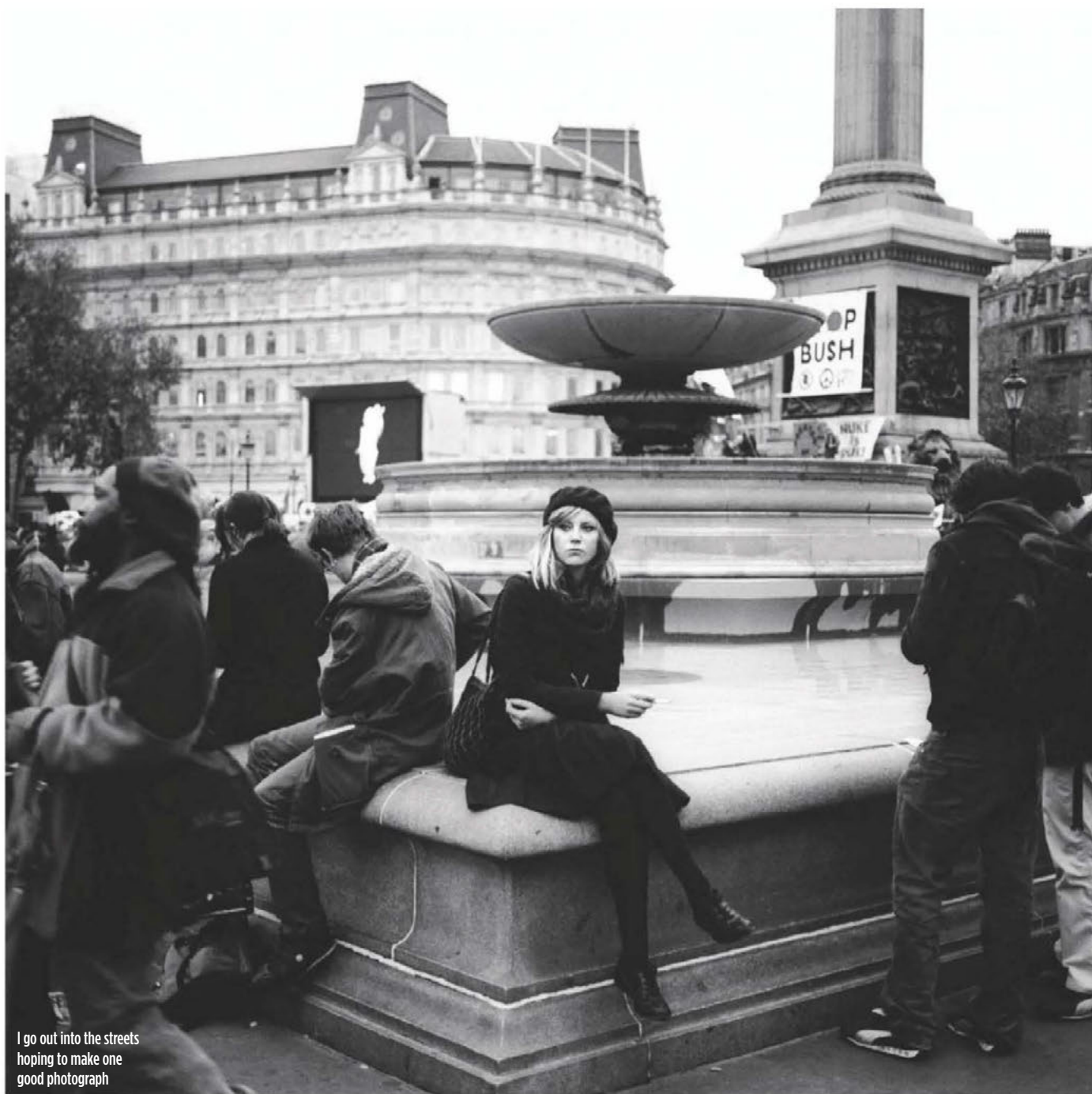
Redeem your rewards today at
whatdigitalcamera.com/rewards

The Rewards scheme is available for all active print subscribers of magazines published by Time Inc. (UK) Ltd, free of charge. Closing dates apply to each partner offer. Please visit the Rewards website for more details. Full terms and conditions are available at mymagazinerewards.co.uk. For enquiries, contact rewards@quadrantsubs.com or call 0330 333 0233 between 8.30am to 17.30pm (GMT) Monday to Friday.

10

Commandments of street photography

Top photographers **Antonio Olmos**, **Rupert Vandervell** and **Jerry Webb** share their expert tips and insights on how to get the best from shooting on the street



ALL IMAGES ON THESE PAGES © ANTONIO OLIVOS

I go out into the streets hoping to make one good photograph

1 MOST OF YOUR PHOTOGRAPHS WILL SUCK

Antonio says: 'Taking photographs is like taking notes – you take a lot of them in the hope you will make one that's amazing. A lot of people new to photography are disappointed by how many bad pictures they take. Well, here is a little secret: everyone, even pros, takes lots of bad images. Like a writer with piles of notes, the photographer must learn to edit his or her work and sift through a stack of pictures to look for that one strong image. I go out into the streets hoping to make one good photograph. Most of my images are a disappointment. Sometimes I try things and they just don't work.'

'Photography for me is about learning to live with constant disappointment. If photography was easy, every image we take would be brilliant. Photography is hard because that great image is very difficult to get. When you do street photography you are working in an environment that you have no control over. People will get in your way, the image will be gone before you raise your camera to your eye, the light will change or you will get the focus wrong. A million things will not work when trying to make an image. A great image from street photography comes from perseverance, patience and complete focus on the task at hand.'

2 WEAR COMFORTABLE CLOTHING

Antonio says: 'First, make sure you have a good pair of shoes. If you're serious about street photography you'll be on your feet all-day long, searching for that elusive image. Many of my favourite shots have come after hours of walking. People with bad shoes tend to give up much sooner than those who are wearing comfortable shoes. It's not just the shoes, though, as you should wear comfortable clothing that reflects the weather you are working in. Cheap shoes lead to blisters – I guarantee you Henri Cartier-Bresson had good shoes.'

'Don't carry too much gear, either – try to work with one camera and a couple of lenses. If you are comfortable and not weighed down by your kit, you will have a productive day. You should also drink lots of water and take breaks, but when you take those breaks get a table on the pavement or sit near a window. You never know what will walk by while you are sipping your latte.'

People often read my body language and get a sense that I am no threat to them



3 USE SHORT LENSES

Antonio says: 'In my opinion, truly great street photography is shot on 50mm, 35mm, 28mm or 24mm lenses. The 35mm is my favourite, whether fitted to my Leica, Sony or my Canon. For street photography. You need to think and see like the lens on your camera. If you shoot with just one lens you will learn how the image will look. Short fixed-focal lenses also force you to get close to the subject. And that immediacy is what makes great street photography. You feel like the photographer is right in the midst of the action. Zooms make you lazy. You zoom in on the world instead of getting in the thick of it. Zooms make your camera stand out, so you're more likely to be noticed when you're trying to be discreet. Zooms are heavier and bigger than average fixed-focal-length lenses and your neck and shoulders will suffer, while fixed-focal-length lenses are lighter and smaller – essential in street photography.'

4 YOU HAVE TO LIKE HUMANS

Antonio says: 'If you don't like people and think most of them are complete idiots, then I suggest you steer well clear of street photography. I find human beings endlessly interesting. I love the way they move, I love their faces, I love the way they dress, I love how they interact with the urban environment – in fact, I love everything about them. It's a joy taking their pictures, and I truly believe people can see that about me. They also read my body language and thus get a sense that I am no threat to them.'

'If you walk around taking photographs in the street, and you're constantly worried about getting mugged or questioned about what you are doing, then you are going to give others the sense that you are not comfortable.'

Short fixed-focal lenses force you to get close to the subject





Close-up shooting can still create a very candid look

ALL IMAGES ON THESE PAGES © JERRY WEBB

5 PROXIMITY

Jerry says: 'How close you are to your subject can be significant. Good street work requires a reasonable wideangle lens and using one usually demands that you are fairly close. The closer you are, the more involved with the subject you become and the more involved the viewer will feel when looking at your photographs.'

'I use a 12-24mm lens, usually around the 12mm mark, meaning I tend to work pretty close a lot of the time. Experience tells me what will appear on the image without making myself conspicuous by looking through the viewfinder. Adjusting the camera

settings is another way of making yourself conspicuous, so set them before you begin taking photographs and leave them. With confidence comes a willingness to get in closer and perhaps even to use fill-in flash.'

'Working closely does not necessarily prevent you from shooting candids, which can be shot with the full knowledge of the subject. Although contact does not constitute pure street photography for many, interaction does not prevent you getting strong images. Sometimes you have no choice, so don't be afraid to ask. Talking with your subject can provide you with valuable

time to think about what you want and the opportunity to direct. Some of my best pictures are of people who have consented to be photographed, but they are taken just before they think the session has started or just after they think it has finished. I then capture completely natural moments – often from positions too close for true candid photography.'



Groups create natural foregrounds that allow you to lead the eye into the photo

Don't be afraid to
shoot into the light



6 WORKING WITH DIFFERENT PLANES

Jerry says: 'Many of the best street photographs have both foreground and background interest – one can feed off the other. Success in achieving this requires patience and sharp intuition, but it can give a powerful dynamic to your photograph. If the foreground relates to the background this can help to create a good narrative, or perhaps a great juxtaposition. Either way, leading the viewer's eye around the photo adds depth and interest.'

'Although snatching images on the street that work like this involves good instinct and a degree of luck, you can improve your 'luck' with some foresight and planning. On a simple level, find an interesting background – this can be anything from a poster to a shop front, bold typography or a group of people – and just wait for something to happen. This is the patience bit. Experience will tell you what works best. I find that having something in mind often helps, but also try keeping your options open for something more spontaneous, as many of my favourite pictures are catching the unexpected. Occasionally you get lucky and find an accidental, but witty, connection between the foreground and background during processing. Sometimes there needs to be no connection at all; simply having movement or interaction on two planes (or even three) of the picture can make a striking photograph.'

'Close proximity to crowds or being in a group creates natural foreground and background interest if you are using a wide lens. This has a deeper depth of field, making focusing easier. Purists may object to the natural distortion of the lens, but it can add drama and tension.'

7 SHOOT AT NIGHT

Rupert says: 'I love to shoot at night, especially during the winter months when good daylight is scarce and it starts to get dark around 5pm. I will sometimes spend hours on the streets at night. If I'm shooting for a specific project, I will have in mind a place that I hope will provide the right kind of scene and then work in and around it.'

'The one great thing about night photography is that the light is always the same and it doesn't matter what the weather's doing. In fact, if it's wet you'll have much more to play with in terms of atmosphere. Places look very different under the streetlamps and an area you might not have considered for street work may suddenly become a good hunting ground.'

'I treat night shoots in the same way as I do day shoots, and to make it work you need at least one good light source. I try to

choose areas that have at least one main streetlamp, which will hopefully define the area where I want to work. From there I find the best viewpoint to balance the scene regarding light, shadow and subject.'

'Additional lighting can come from car lights, reflections and shop windows. I'm never too bothered about getting a technically perfect shot at night. What I am looking for is the right atmosphere. You will be shooting with a higher ISO and a certain amount of grain is inevitable, which is often what helps to make the shot more authentic. People in the city become more isolated at night as there are fewer of them around and the mood is completely different to during the day. I've always been fascinated by the film noir look – those wonderful figures in hats and overcoats emerging from deep shadows at night always inspire me.'

If it's wet you'll have much more to play with in terms of atmosphere



ALL IMAGES THIS PAGE © RUPERT WANDERVELL

A smaller camera is much easier to conceal and you won't be advertising what you're up to

8 USE A SMALL CAMERA AND CARRY ONLY THE ESSENTIALS

Rupert says: 'When I go out to shoot, I want to feel like I'm one of the crowd, and blend in and remain anonymous. The last thing I want to do is to draw attention to myself. I see guys lugging bulky and heavy-looking cameras and gear around with them and wonder how they manage. For street photography, carrying too much gear around with you is a mistake. It's tiring and restricts your movements. I can be out for hours at a time and I may get tired from constantly being on my feet, but never from carrying a



9 CHOOSING YOUR ENVIRONMENT

Jerry says: 'Being a street photographer or just taking candid pictures can be stressful at times and difficult to conceal, so the environment you choose to work in plays a big part, whatever your experience may be.'

'Selecting where you photograph is absolutely key. Location can not only dictate the style of pictures and how you go about creating them, but it also affects how you and those you are photographing are feeling.'

'Choosing your local area gives you a number of advantages. It gives you the benefit of local knowledge, a feel for where to look for pictures and an understanding of the people, plus maybe a little added confidence. Investigating new locations can bring added excitement and inspire new ideas, but returning to the same location and using both your experience and knowledge of the location can pay great dividends.'

'As a rule, the busier the environment the easier photography can be and the more picture opportunities there are available.'

After a while you develop an instinct about whether the location will be fruitful or not. Public or sporting events, or tourist areas, are ideal for people photography and particularly suited to the novice or those lacking confidence. You will usually find a greater acceptance and a relaxed attitude to photographers, and often such places are full of other people taking pictures. This makes it much easier to blend in and provide you with a more relaxed photography experience.

'One of my most successful techniques is to find a seat in a busy street or shopping area and just sit there with a camera. I let the subjects come to me and wait for groups of people, movement, unusual dress or just interesting interaction, often buying myself an ice cream or a drink. Looking relaxed while taking photos in public helps to avoid attention. Nervous photographers are more visible. If you find a good location, be patient and take plenty of shots as it may be a while before you find something better.'



heavy camera bag. A smaller camera is easier to conceal and you won't be advertising what you're up to. Between shots you can hide it under your jacket or behind you as you move into position – sometimes it's all about stealth. I remember seeing Joel Meyerowitz shooting on the streets of New York. He moved like a cat. You wouldn't know what he was up to until it was too late and he'd got the picture.

'There are so many great small, lightweight cameras around. I use an Olympus OM-D E-M5 with a 20mm lens. It's fast, small and very light. I prefer to use my feet to do the framing and get myself into the right position for the shot. Street shooting is about being in the right place. If you're more mobile, you'll give yourself a better chance.'



10 BE PATIENT

Rupert says: 'You may find a place that you think will be the perfect setting for a shot, but something isn't quite as you want it. The light may not be right or perhaps people haven't yet walked into the frame. Some photographers are too ready to move on if they don't immediately see something to their liking.'

'It's not just about looking at what's in front of you, as you have to look right into a scene to see its potential. A slight movement to the left or right, or moving in closer, can reveal a whole new dimension to a shot.'

'I will always stay with an area if I think it might yield something. I get more excited by the minute at the prospect of capturing just what I have in mind. I love watching how the light plays with a scene. I've learned to be very patient and I won't leave until I think I've got the best I can. The light can change very quickly depending on the time of year, and I have watched shadows sliding into new positions to create a completely different feel.'

'When shooting people, I try to anticipate their movements. You need to be ready and poised for that moment when they hit the right spot. If you're lucky and you've combined the perfect light with everything else, you'll feel happy that you waited to get it. Good shots come to those who wait.'

Light changes very quickly depending on the time of year, and shadows slide into new positions



When shooting people, I try to anticipate their movements



You have to look right into a scene to see its potential



ROUND THREE
NOW OPEN!



AFOY

£10,000
IN PRIZES
TO BE WON

Amateur Filmmaker of the Year competition

Your chance to enter the UK's newest competition for budding amateur filmmakers

TO COINCIDE with the launch of The Video Mode website, we're pleased to announce our new Amateur Filmmaker of the Year (AFOY) competition. AFOY challenges you to get creative with your filmmaking, and gives you the opportunity to win some fantastic prizes worth £10,000 in total.

The competition is split into three rounds, each with its unique theme: Nature, Time and Love. To enter, submit a video no more than five minutes in length, of HD quality. You can shoot on any camera you'd like, and the content and editing are up to your imagination – so long as it fits

the round's particular theme.

Visit www.thevideomode.com to view the top videos, as well as the scores and a leaderboard for the overall competition. The winner will be the person with the most points after three rounds, who will win the overall prize as well as title of Amateur Filmmaker of the Year.

Round Three: Love

We want to see how you convey your love for someone or something through film in a creative way for this round. Try using techniques such as 'lens whacking' or 'light leaks' to add that soft feel to your footage. For examples, go to www.thevideomode.com/examples.

Rounds and dates

Below is a list of the competition rounds, their themes and the dates you need to know. To view the results, visit www.thevideomode.com. When planning your entry, take into consideration the criteria of fulfilling the brief, creativity and technical excellence on which you'll be judged.

Theme	Opens	Closes
Round One: Nature	1 Aug	30 Sep
Round Two: Time	1 Oct	31 Dec
Round Three: Love	1 Jan	28 Feb

The overall winner will be announced in April 2016

Prizes

Enter to win your share of prizes worth over £10 000! Here's what you could receive:

Round One

Canon EOS 7D Mark II, worth
£1,499.99

Canon Legria Mini X, worth £329.99

Round Two

Canon EOS 5D Mark III, worth £2,499.99
Canon Legria Mini X, worth £329.99

Round Three

Canon XC10 (with 128GB CFast card
and reader), worth £1,999.99

Canon Legria Mini X, worth £329.99

Overall prize

Canon Cinema EOS C100 Mark II,
worth £3,599.99

Visit www.thevideomode.com/afoy3

to send us a link to your short film and to view the full terms and conditions

THE **VIDEO** MODE In association with **Canon**

Setting up a home darkroom

Photographer **Steven Taylor** shares his advice on how to create your own darkroom and **Andrew Sanderson** then shows you how to make your own prints

Almost every photographer has their own story of when they got hooked on developing their own prints. For me, and many other people of my generation, it was the moment that I first saw an image slowly emerge in the red safelight of the darkroom. Back then I found it magical – and I still do 40 years later. Silver-gelatin prints from film negatives have an aesthetic that is separate from any digital process. Yes, you could buy the film-simulation software and have inkjet prints made on fibre-based papers. That will get you close to the silver-print look, but the magic just isn't there. Photographers are increasingly returning to the darkroom. Even those who have never used film before are discovering a craft new to them that can fulfil their creative urge.

You don't have to invest in all the paraphernalia immediately. Try it first to see whether it suits you. There are a number of public darkrooms, and courses

and classes that will allow you to give it a try. Have a look at Harman Technology Ltd's local darkroom site to find one near you (www.localdarkroom.com).

When I was a young art student, my first darkroom was actually my bedroom. It was probably not ideal, but it was the only space I had.

I have known people who have set up great darkrooms in spare rooms, bathrooms, garden sheds, garages, barns and outside privies. If there are a few of you, consider clubbing together to rent a workshop space.

THE SPACE

Please remember to read the safety advice on chemical packs, although the chemicals we use in the darkroom are generally no more dangerous than cleaning chemicals used in the kitchen. You'll need to take a few precautions, though. It's probably not a great idea to ingest any of the chemicals. If you get any on your hands you should wash

As you're working with a variety of chemicals, good ventilation and fresh-air breaks are a must



Creating and working with your own negatives is an endlessly rewarding experience

bathroom – you can collect your fixed prints in a holding bath and move to the water supply periodically. You'll also need a supply of electricity to feed the enlarger and safelights – an extension lead into the garden shed will do.

You should keep the wet process separate from the enlarger as much as possible. After each wet process you should rinse and thoroughly dry your hands before handling dry paper and electrical equipment.

ENLARGER

If you're going to make prints bigger than the negative you'll need an enlarger. Durst is probably the most common brand available in the UK, and while it's not manufacturing any longer, a search on eBay will bring up a lot. If you'd prefer to buy brand new, Bessler and Kaiser are still making enlargers.

There are generally three types of enlarger head: condenser, cold cathode and diffuser. Colour enlargers, which work just as well for black & white, are usually diffuser heads and have three filter dials in cyan, yellow and magenta. Some printers swear by cold cathode, while others like condensers. I use colour enlargers. You can also sometimes find enlargers with a multigrade head, which are very similar to colour heads but with a dedicated filter system designed to control print contrast.

The other consideration is the size of negatives you want to print from. Most enlargers will also handle negatives smaller than the largest they're designed for, so a 6x6cm enlarger will also work for 35mm but not 6x7cm. As with camera work, you should use the best lens you can afford. Schneider, Rodenstock and Nikkor are all good makes. You'll need a lens that has sufficient coverage for your negative size. So 50mm covers 35mm, 80mm for 6x6cm, 90mm or 105mm for 6x7cm and 150mm for 5x4in, then negative carriers for the size of negative as well.

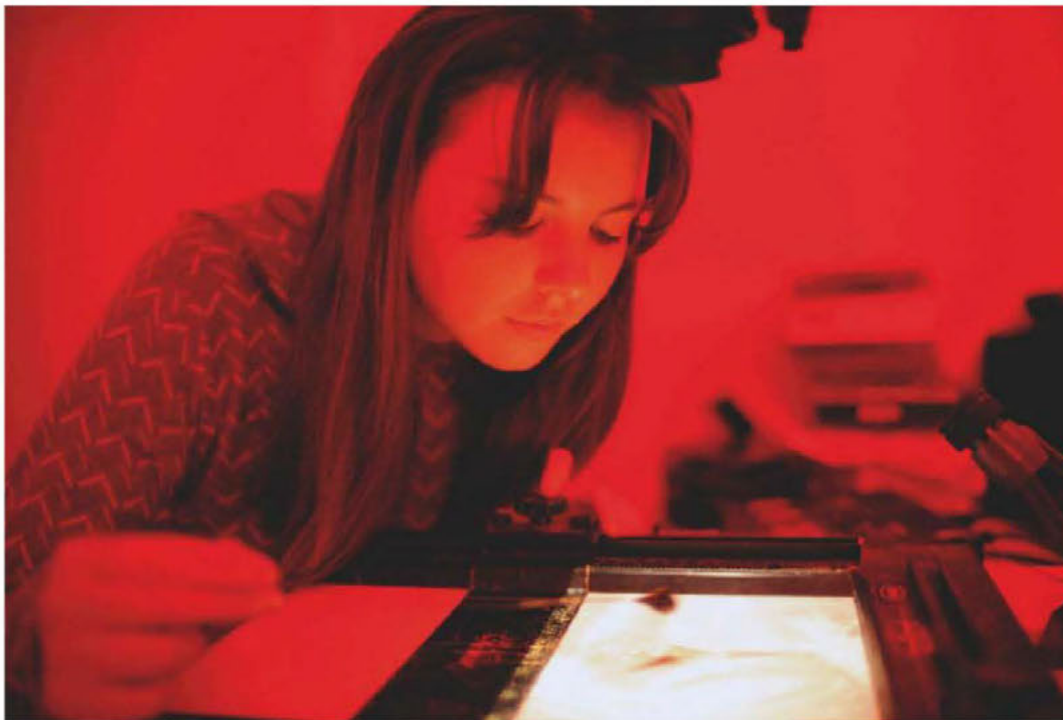
The enlarger will have a bulb that supplies the light to project through the negative onto the baseboard of the enlarger. The light will expose the light-sensitive paper, with the darker parts of the negative blocking the light

with hot water and soap before you eat. I wouldn't recommend bringing food and drink into the darkroom for the same reasons, and I'd say the kitchen isn't the best space to set up your equipment in the first place.

If your skin is sensitive it's recommended that you avoid contact with the chemicals. Instead, buy a pair of tongs or wear latex gloves.

The working solutions will be very diluted, but at full strength some can catch your breath a little. Good ventilation and regular fresh-air breaks are important. The acid stop bath and fixer can be a little smelly (although some of us rather like the odour), which means that working in a bedroom that you're going to spend the night in may not be ideal.

You'll also need a water supply and drainage. At the end of the process the prints will need to be washed in running water. If your space doesn't have a water supply, but is near to one – for example, a spare room with access to a



A safelight in the darkroom is of paramount importance to avoid fogging your prints

so the paper receives less exposure and an image is formed. The enlarger works like a vertical projector.

The exposure is controlled using combinations of intensity and time. The intensity is controlled by the aperture size in the lens. We tend to work at about 3 stops down from wide open ($f/8$ or $f/11$), as that's the most efficient centre of the lens and gives an exposure that's neither too quick to work the image, nor too slow and keeps you waiting all day. The enlarger light will stay on for a predetermined period and then it switches out, although you could just use a switch and manually time the exposure.

Timers can range from simple, like a kitchen timer, to very advanced – like the RH Designs f-stop printing timer that, as the name suggests, times the print in f-stops rather than seconds.

EASEL

To keep the printing paper in place you should use an easel. RR Beard made what many consider to be the best for years. I have one that takes 20x24in, one that takes 20x16in and one that takes 14x11in paper. You can set a border between $\frac{1}{4}$ in and 2in. Probably the most common make you see second-hand is LPL.

SAFELIGHT

Because the printing paper is only sensitive to the blue end of the spectrum, you can work under a red or orange safelight. The most common make is Paterson, which uses a 15-watt pygmy bulb that can be plugged into a household plug socket. I suggest you keep them around 4ft (1.2 metres) away from the light-sensitive paper. You'll definitely need one over the developer tray.

THE WET SIDE

In my first bedroom-based darkroom, I placed my enlarger on the dressing table and on the opposite side of the room I erected a wallpaper-pasting table that held four trays – one with developer, one with stop bath, one with fixer and the final one with a holding tray of plain water. Every now and then I'd take the holding tray to the bathroom where I washed my prints under running water in a tray sitting in the bath itself.

THE ALCHEMIST'S WORKSHOP

The Lake District is a great location to photograph or just visit, to appreciate the sheer beauty of the landscape. Photographer Steven Taylor has set up a two-day course in the area to take you through all things SLR and darkroom. One of the days will be spent in the darkroom getting the best from your negatives to make beautiful black & white silver-gelatin prints for you to take away. Handily, Steven will also give you a step-by-step guide to exactly what you'll need to set up your own home darkroom. The two-day course costs £150. Visit www.thealchemistsworkshop.co.uk for more information.



The trays should be a little larger than the paper size you want to work with. Often they're listed on eBay in sets of three – dev, stop and fix – but clearly you'll need a washing system. The simplest ones are trays just like the dev trays, but under a tap. There are a number of other systems, including archival slot washers, to choose from.

CONSUMABLES

Harman Technologies Ltd makes and distributes the Ilford and Kentmere range of black & white materials. Ilford papers are available as fibre-based or resin-coated. The resin-coated papers are easier to handle, because the emulsion sits on the surface and the chemicals act quickly. Drying can be forced with a hairdryer or fan heater.

The fibre-based papers give a richer, deeper image. The emulsion sinks deep into the fibres, so the physical depth alludes to an intense visual depth in the shadows. If properly handled and treated, these papers have empirically tested archival permanence like no other photographic or digital printing material or process. The pay-off though, is that it takes a lot more careful handling and is much slower to work with. Drying has to be done overnight. Some lay the prints flat on fibre-glass screens or tape them to glass. I peg them back-to-back from a line.

Either way, they'll curl as they dry. They then have to be pressed (I pile books on top of them) to flatten them again.

Paper developer is not the same as the film developer. It's much faster working. Ilford's standard paper developer is called Multigrade and is diluted 1:9 for working strength. Ilford makes a stop bath, Ilfostop, which is designed to arrest the development process. It's advisable to use Ilfostop if you plan to use the fixer for a long session. Ilfostop is used at 1:19 dilution. You can do without it and just use water if you're only going to keep the fixer for five or six 10x8s or smaller. I use Ilford Hypam fixer at 1:4 to fix my prints.

Andrew Sanderson's **step-by-step** guide to making a print

Making your own prints in the darkroom has to be one of the most rewarding things a photographer can experience. Below is a quick, easy guide to making photographic prints



1 USING THE ENLARGER

Once the chemicals have been measured out, place the negative in the enlarger carrier with the shiny side upwards and the numbers away from you. Set the enlarger at the correct height to give a projected image big enough for the chosen print size. Each time you alter the height, refocus the image.



2 POSITIONING

Turn on the enlarger and alter the aperture ring of the lens until the brightest image is projected onto the baseboard. Focus the image on the masking frame. Turn the lens's aperture ring until you feel two clicks and see a darkening of the projected image. This should be 2 stops darker than the lens's maximum aperture.



3 CHECK SHARPNESS

Check for critical sharpness by using a focus finder if you have one, but remember to set it for your own eyesight first. Turn off the enlarger until ready for exposure. Now remove a sheet of paper and cut it up to use for test strips. You should be able to get roughly ten 10x5cm pieces from a 10x8in sheet.



4 MAKE A TEST STRIP

Place a Grade 2 filter into the enlarger, then place one of your cut pieces of paper on the masking frame. Expose for 5secs. Cover a 1cm strip of the paper with card and expose for another 5secs. Repeat until the last strip of paper has been exposed. Make sure you don't move the test paper as you move the card.



5 DEVELOPING THE IMAGE

Place the exposed paper into the tray of developer and gently rock the solution back and forth, trying to get the paper submerged all at the same time. Timing is important – 1min for RC paper, but this will need longer in cold conditions. Avoid poking the paper with tongs as this can leave marks on the image.



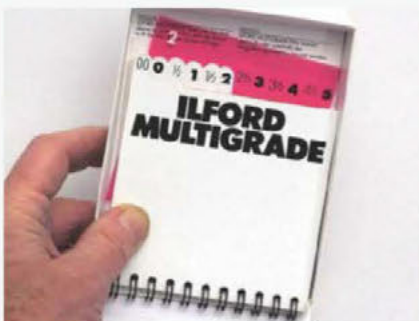
6 STOP AND FIX

Remove the paper from the developer after the allotted time and drain briefly. Slide the paper into the stop bath and gently rock the stop bath tray for 10secs. Remove, drain and slide it into a tray of fixer, gently rocking again (10secs for test strips and 1-2mins for finished prints).



7 REVIEW

Remove the test from the fix and view by white light (make sure your box of unexposed paper is closed). Counting from the lightest end of the test in fives, look for the first exposure that looks correct, and this will be your exposure time for the full print. This method will produce good 'beginner' prints.



8 ADJUSTING CONTRAST

If the print is too high in contrast, replace the Grade 2 filter with a Grade 1 and re-test. If the improvement is only slight, move down to Grade 0 and re-test. However, if the print is grey and flat, replace the Grade 2 filter with a Grade 3 and re-test. If the improvement is only slight, move up another grade to 4 and re-test.



9 FINAL PRINT

When the correct exposure and contrast grade have been established, place a sheet in the masking frame and expose. Develop and stop as you did for the test, fix for 1min and wash for 5-10mins. Don't leave prints in water for more than 30mins. Hang the fully washed print up to dry or lay it out on blotting paper.



Returning to film

Film might surprise you with its creative possibilities. **Andrew Sanderson** explains the basics of black & white film photography

Black & white film photography is becoming more and more appreciated. After all, some of the most amazing pictures from the history of photography were taken on film (or glass plates) and there are still thousands of dedicated film users around today. Why is that? Why should you consider using it again? And if you've never loaded a roll of film into a camera, why should you start now?

I believe black & white film can be an amazingly creative and rewarding medium. It can be frustrating when things don't turn out as planned, but this is usually down to poorly thought-out methods. If you can get over the odd disappointment, then making mistakes can sharpen your wits and improve your photography very quickly. It doesn't have to be an expensive exercise, either. There are countless second-hand film cameras still on the market, and young entrepreneurs are even now setting up businesses based on film equipment and methods. There is a wonderful second-hand film camera shop in Leeds, run by two young guys, which is packed with beautiful old

film cameras (check out www.wycameras.com).

You only have to look at the popularity of the Holga camera, the Lomo and the revival of some of the Polaroid films by The Impossible Project to see that film is still viable, popular and cool. And just consider the sheer number of apps and plug-in filters that mimic film effects. So why not try the real thing if you haven't before? Some basic film cameras such as Zenit and Praktica are probably cheaper to buy than the software available to fake the results they create!

Film cameras are a joy to hold and to use. They feel properly made – beautiful, well-engineered objects. When you press the shutter, the camera fires immediately without lag or delay. If you're using a fully manual camera that doesn't rely on any form of battery, you don't have to carry spare batteries around, or hard drives to back up your pictures. And once your images are processed as negatives, you'll have them for life. No crashing, accidental deletion or software incompatibility issues – the negatives will still be printable for hundreds of years.

1 LOW-SENSITIVITY FILMS

The slowest films currently available are specialist types that need careful processing and are designed to give the greatest detail and the finest grain. There are a number on the market, with speeds that range from ISO 3-25, depending on how they are developed. These include ADOX CMS 20 II, Gigabitfilm, Kodak Technical Pan and Rollei ATP 1.1 Technical Pan. Next in the speed ratings are the ISO 50 films, although Ilford Pan F Plus is the only one currently available. To get the best out of them, I would advise processing soon after the film is finished, but you can expect smooth tonality and very fine grain.



Slow, fine-grained films are ideal for detail and smooth highlights. This shot was taken using Ilford Pan F Plus

ALL PICTURES © ANDREW SANDERSON

2 FAST FILMS

ISO 400 films were once considered fast, and a lot of press photography was shot on them. If you're after a slightly grainy look, these will provide it. While they're not as grainy as they used to be, due to advances in film manufacture, the grain is still visible. These are good general-purpose films and excellent for street photography. Ilford HP5 Plus, Ilford Delta 400, Kodak Tri-X, Kodak T-Max 400, Fomapan 400 and Kentmere 400 are all worth looking at.

There are a couple of ISO 400-speed films that have a much finer grain structure (strictly speaking, a dye image), but they need to be processed using the same chemicals as colour negative film. This C-41 process is used by all high-street minilabs, so it's easy to get this type of film developed.

The films are known as chromogenic films and there are two on the market that I know of: Ilford XP2 and Fujifilm Neopan 400 CN. Both are rated at ISO 400, but I'd suggest you set your meter's ISO to 320. This will overexpose each frame a bit, but give you much better negatives. Don't tell the lab, though! Just get them to process it as normal.

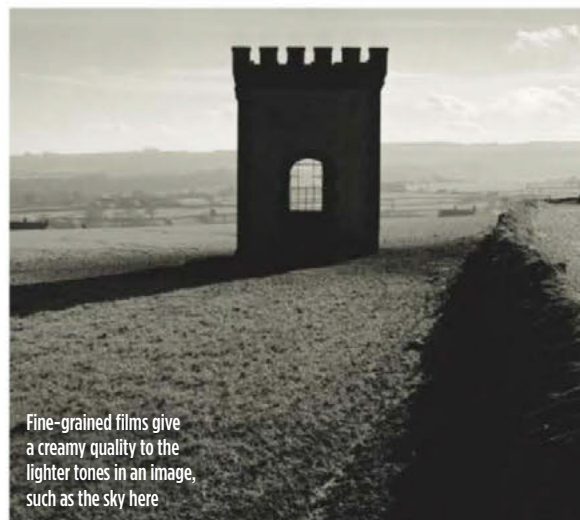
Fast films today are between ISO 1,600 and ISO 3,200. Fujifilm Neopan 1600 has been discontinued, but you may find the odd roll online. Some photographers love it, but I found it a bit too contrasty. Ilford's Delta 3200 is a good all-rounder: it can be rated at speeds between ISO 800 and ISO 3,200, although it's claimed it can be rated much higher. You're welcome to try this, but don't expect much printable detail on the negative. My preference is to rate it at ISO 1,600 and process it for the appropriate time, as this gives a good tonality and superb grain. Kodak made one of the same speed too, but I believe it has been discontinued.



An ISO 400 film, such as Ilford HP5, gives a gritty, punchy look when uprated to ISO 1,600

3 MIDDLE-RANGE FILMS

Different photographers have their preferences, but the quality is good with all middle-range films. Processed in the correct developer, they will still give you fine grain and smooth tonality, but not as fine as the previously mentioned films. Ilford FP4 Plus, Ilford Delta 100, Fomapan 100 Classic, Fujifilm Neopan 100 Acros, Kentmere 100, Kodak T-Max 100 and Rollei Blackbird 100 – I haven't tried them all, but I know that FP4, Delta 100 and T-Max 100 all produce beautiful negatives.



Fine-grained films give a creamy quality to the lighter tones in an image, such as the sky here



True infrared films give snowy-white foliage in sunlight

4 SPECIALIST FILMS

There are a few unusual films that fall outside the normal range listed so far. There are infrared and pseudo-infrared films, such as Ilford SFX, as well as oddities like Ortho film. This will give you different tonality from ordinary (panchromatic) films, since it is mainly blue-sensitive. This means skies are rendered oddly and skin tones come out much darker. It can, however, be loaded and

processed under red safelight rather than total darkness.

So that's my quick rundown on film. Go out and shoot some and enjoy the challenge it provides. Film imposes a discipline that will sharpen your wits.

USEFUL CONTACTS

For more information on available black & white films, take a look at the links below:
www.adox.de, www.gigabitfilm.de,
www.rolleifilm.com, www.ilfordphoto.com,
www.foma.cz, www.fujifilm.co.uk,
www.kentmere.co.uk, www.silverprint.co.uk

Black & white negative film

With a variety of films to choose from, which one is right for you? Photographic supplies store **Silverprint** gives you some ideas

While there's a good range of colour films on the market, there are more black & white film brands. You can turn to pages 84-86 for a thorough guide on choosing the right black & white film for you, but here we take a look at some of the black & white films you may not necessarily have considered, as well as a few familiar names.

ILFORD SFX 200

SFX 200 is a high-speed, high-contrast and infrared-sensitive black & white film for 35mm and 120. The film is used with either a deep red

(Wratten 25) or completely visually opaque (Wratten 87 series) filter. Care must be taken when using it to prevent fogging. A stainless-steel processing tank is recommended.



ILFORD XP2 SUPER 400

This is a fine-grained 35mm and 120 black & white ISO 400 film. It is processed in standard colour negative chemistry (C-41). XP2 Super has been through several improvements to make it sharper and to give full quality in C-41 without modifications. It can also yield a neutral image when printed onto colour paper (so long as the filtration is set properly – something even some one-hour labs will now do), as well as printing on traditional black & white paper.



KENTMERE 100

This medium-speed 35mm black & white camera film is suitable for a variety of indoor and outdoor applications of photography where good lighting exists. It has the capability to generate high-quality images with fine grain and good sharpness, and is a good choice of film if enlargement prints are desired.



FUJIFILM NEOPAN 100 ACROS

Neopan 100 Acros is a medium-speed black & white 35mm and 120 film with high resolution and ultra-fine grain. It achieves high grain quality while attaining excellent exposure, coupled with its outstanding shadow reproduction. The film utilises Fujifilm's Sigma Crystal Technology and Super Uniform Fine-Grain Technology by greatly increasing the amount of light captured by using the absorbed light more effectively.

KODAK TRI-X

Tri-X is a very popular ISO 400 35mm and 120 film, which has remained basically unchanged for decades. It's generally considered the classic photojournalists' film. It's enormously flexible in processing and prints with a distinctive punchy snappiness. It is available in all common formats, with the exception (in the UK) of 8x10. It has a sharp, tight grain structure and is a good film for pushing to a reasonable level.



KODAK PROFESSIONAL T-MAX 100

T-Max 100 35mm uses T-Grain technology, yielding fine grain relative to film speed. This is done by employing a tabular (or flatter) grain structure and a high degree of sensitisation. This requires more attention at the fixing stage – to remove all sensitising dye. Approximately double the normal fixing time must be used, and the fixer will exhaust more quickly. T-Max fixer is an extra-rapid formula designed to complement this series of films.



FOMAPAN 100 CLASSIC

This panchromatically sensitised black & white 35mm and 120 film meets high requirements for low granularity, high resolving power and contour sharpness and a wide range of halftones. Fomapan 100 Classic has a nominal speed rating of ISO 100, but due to its wide exposure latitude it gives good results even when overexposed by 1 stop (as ISO 50) or underexposed by 2 stops (as ISO 400) without any change in processing (that is, without lengthening the development time or increasing the temperature of the developer used). To make prints or enlargements, all types of black & white enlarging papers can be used.



AGFAPHOTO APX PROFESSIONAL 100

APX Professional 100 35mm is universally suitable for all professional applications. Thanks to its fine grain and wide range of exposure, it produces striking images with excellent sharpness and contrast. The strengths of APX 100 are apparent in diverse fields, such as architecture, landscape, and documentary.



ROLLEI RETRO 80S 35MM

This is a new 35mm and 120 film derived from the AgfaPhoto Aviphot Pan 80 aerial film. The emulsion is coated onto a transparent synthetic base providing excellent long-term and dimensional stability. It is suitable for both daylight and tungsten lighting. The transparent base also makes it good for scanning.



ADOX CHS 100 II

CHS 100 II is a sensitised 35mm black & white film with classic grain and a tonal range optimised for greyscale separation. The film is made from two separate emulsions in a single-layer coating and yields a very large exposure latitude. Due to its classic sensitisation it features a very harmonic tonal separation. Compared to most modern films it differentiates better between lips and face, clouds and sky, and water and land. The film is coated onto clear archival PET.



You can visit **SILVERPRINT** at 120 London Road, London SE1 6LF. Alternatively, email sales@silverprint.co.uk or call 020 7620 0169. Visit www.silverprint.co.uk for the website and online shop. Opening hours are Monday-Friday 9.30-17.30, Thursday 9.30-20.00 (closed on Sat and Sun).

OTHER SUPPLIERS **Bob Rigby Photographic** www.bobrigby.com, 01625 575 591; **Fujifilm** www.ccmaging.co.uk/film/fujifilm, 08445 532 316; **Harman Express** (Ilford) www.harmanexpress.com, 01565 684 000; **Keyphoto** www.keyphoto.com, 01582 460 461; **Nova Darkroom** www.novadarkroom.com, 01789 739 200; **Second-hand Darkroom Supplies** www.seconddhanddarkroom.co.uk, 01993 878 323; **Speed Graphic** www.speedgraphic.co.uk, 01420 560 066; **Tetenal** www.tetenaluk.com, 0116 289 3644; **The Small Battery Company** (batteries) www.smallbatterycompany.org.uk, 0208 871 3730

Processing film

Andrew Sanderson offers you a step-by step guide to show just how easy it is to process your own film negatives

Because home processing is less common these days than it was in the past, I think people are put off trying it in the mistaken belief that it's difficult. It isn't, and once you have seen it done or tried it yourself, you'll wonder why you ever hesitated in the first place.

To begin processing you'll need to buy a few things, but it won't cost much and the equipment will last for years. The most important consideration is the chemicals you use as there are currently a large number of film developers available.

The first chemical you'll need is a developer. Some developers give finer grain and better detail, while others give sharper-looking images but with exaggerated grain.

There are developers that you mix up from powder and store as a large volume of working solution, and there are others that come as a bottle of concentrate that you dilute immediately before use. Some of them can be used many times over and others are discarded after just one use.

The bottled concentrate is best to start with, as it will give more consistent results so long as you're careful with your measuring. There is also less risk of you breathing in the powder as you mix it. Before you pour the developer into your developing tank and the waiting film, you need to know three important factors for the process:

- 1) the strength of the developer;
- 2) the actual temperature of the developer;
- 3) and how long it's in the tank.

The developer that

I'm going to recommend you to try first is Ilford Ilfotec DD-X. This is a superb developer and is easy to use. It's mixed with water to a ratio of 1:4 (in all the ratios mentioned here, the smaller number refers to the concentrate and the larger number refers to the water quantity).

The developer works on the parts of the film that have received light, making them go increasingly darker and darker. If you stop development too soon you'll have pale-grey images that won't scan or print properly. Letting the developer work on the film too long will cause those areas to go totally black, and this will prevent light passing through, making it virtually impossible to see any detail in those areas.

If the developer is too warm, then it will blacken the film faster; while if it's cold it will take longer. To help ensure that you have the right developer temperature, get yourself a large jug of roughly room-temperature water. Put the thermometer in and keep adding hot or cold water until you have the water at 20°C, then measure out 280ml into your large measuring container. In a smaller measuring container, pour out 70ml of Ilfotec DD-X. Now mix them together and give it a quick stir.

You now have 350ml of working-strength solution. This is more than is needed to cover the film in the tank, but having that extra 50ml will ensure that the film is still covered, even when agitation causes frothing.

STOP BATH

The aptly named stop bath is simply a diluted acid, which stops the action of the alkaline developer and prevents it from going any further. The concentrate is rather strong, so don't get it on your skin. Dilute it with water to get a working-strength solution – usually 1 part stop to 19 parts water – and a slightly weaker mix is better than a slightly stronger one.

Finally, the third chemical in the process is the fix. The oldest type of fix was known as hypo, but is slow to work. Most people use the quicker type known as 'rapid fixer'. If you're buying Ilford products, you might as well use Ilford Hypam rapid fix mixed at 1:4.

WASHING

The fix, which is embedded in the emulsion of the film, will bleach away the images if it's not removed, so washing is essential. Put the tank in the sink and fill it with cold water. Rinse the whole tank, the funnel and the lid to get the worst of the fix off, then pour out the water and refill. Put the funnel in, the lid back on and agitate by inverting it five times. Pour out the water and refill, put the lid back on and invert 10 times. Pour out the water and refill it again, then invert it 20 times. Empty the tank, refill and leave it to stand for 10 minutes – this will allow small amounts of fix to diffuse out of the film.

Then invert it 20 times, remove the film from the spiral and, finally, hang it up to dry. Some photographers advise that after washing it you should always squeegee the film from top to bottom in order to get the water droplets off, but this can scratch or damage it, so I never do it.

KIT LIST

TOOLS

- Rubber gloves
- Changing bag
- Bottle opener
- Scissors
- Thermometer
- Large funnel
- 1x 150mm and 3x 1l measuring jugs
- Negative storage pages
- Developing tank

CHEMICALS

- Ilford Ilfotec DD-X concentrate (1l bottle). Dilute 1:4 to use (70ml concentrate to 280ml of water)
- Ilford Ilfostop Stop Bath (500ml bottle). Dilute 1:19 to use (17ml concentrate to 330ml of water)
- Ilford Hypam (1l bottle). Dilute 1:4 to use (70ml concentrate to 280ml of water)

USEFUL LINKS

www.thewebdarkroom.co.uk
www.ilfordphoto.com
www.keyphoto.com
www.patersonphotographic.com
www.discountfilmsdirect.co.uk
www.firstcall-photographic.co.uk
www.thedarkroom.co.uk
www.theimagingwarehouse.com

Andrew Sanderson's **step-by-step** DIY processing guide

Processing your own film is easier than you think and very satisfying as you have total control



1 PREPARING YOUR FILM

Using a changing bag, remove the film from its canister and feed into the spiral of the central reel from the tank. Cut off the thin end of the film (known as the film leader) and push the cut end of the film in where the lugs on the spiral protrude.



2 LOADING THE FILM

If you can push the film in, continue in this way, but if it gets too stiff don't force it, as you'll crease it. If pushing isn't possible, hold the spiral with one side in each hand and twist it backwards and forwards, drawing the film in as it's gripped by the ball bearings.



3 PLACE IN DEV TANK

When the full length of the film is almost loaded, cut the film spool off the end and make sure all the film is fully on the spiral. Put the spiral onto the central column and push it right down. Put the black funnel in and turn until it clicks.



4 SET OUT CHEMICALS

Once the tank funnel has been clicked into place, it's time to get your chemicals ready. Wearing rubber gloves, I'd also advise that you cover your table or work surface with plenty of newspaper in case of a spillage or splash. Ideally, your location should be the bathroom, not the dining table.



5 AGITATE

Pour the developer (ensuring correct temperature and ratio) into the tank and push on the rubber cap. Now invert the tank 10 times, put it down and start your timer. When 1 minute has elapsed, pick up the tank and invert it three times, then put it down again. Repeat this each minute until you get to the ninth minute.



6 STOP BATH

Remove the rubber cap, pour away the developer and then pour in 350ml of stop bath (1:19). Put the cap on and agitate the tank 10 times. Pour the stop bath back into the measuring flask to be used again (keep two bottles with good lids to store your used stop and fix), and pour in 350ml of working-strength fix.



7 FIX

Start your timer and agitate the tank for 1 minute. Take off the rubber cap, take out the funnel and lift out the spiral. The film will look milky rather than clear. Put the spiral back in the fix and agitate it by turning it forwards and backwards, and lifting and lowering it. Check the milkiness every 30 seconds and look at the timer.



8 MOVING

When the milkiness has gone, the film is half fixed, so double whatever time this is. Keep it moving round and round, up and down, throughout the fixing time (relatively quick in summer, quite a bit longer in winter, when the chemicals are colder). Once the film has been fixed, return the chemical to a storage bottle.



9 WASH AND HANG

Washing is essential and then it leave to dry. At this point, the film surface is vulnerable to damage, so avoid the temptation to look at it. A good place to hang your film is in the shower overnight. A bit of bent wire will hold it at the top, but don't let it touch any surfaces. A wooden peg on the bottom will help to reduce curl when it dries.

ORDER FORM

Post the completed order form to: FREEPOST RTKA-YLJG-HAAK, Time Inc. (UK) Ltd, Rockwood House, 9-16 Perrymount Road, HAYWARDS HEATH, RH16 3DH. (No stamp needed)

YES! I would like to subscribe to Amateur Photographer saving up to 35%

☐ **UK Direct Debit, pay only £24.99 per quarter, SAVING YOU 35% of the full price of £38.88**

TOP OFFER

☐ **2 years (102 issues) Credit Card- Pay only £201.99 (full price £311.00) saving 35% across the two years**

☐ **1 year (51 issues) Credit card- Pay only £108.49 (full price £155.50) saving 30% across the year**

YOUR DETAILS:

Mr/Mrs/Miss/Ms: Forename:

Surname:

If you would like to receive emails from Amateur Photographer and Time Inc. (UK) Ltd containing news, special offers, product and service information and, occasionally, take part in our magazine research via email, please include your email below.

Email:

Address:

Postcode:

Home Tel. No: (inc area code)

If you would like to receive messages from Amateur Photographer and Time Inc. (UK) Ltd containing news, special offers, product and service information and, occasionally, take part in our magazine research via your mobile, please include your mobile phone number below.

Mobile:

Date of Birth: DD MM YYYY

GIFT SUBSCRIPTION

Mr/Mrs/Miss/Ms: Forename:

Surname:

Address:

CHOOSE FROM 3 EASY WAYS TO PAY:

1. CHEQUE

I enclose a cheque/postal order for: £ made payable to Time Inc. (UK) Ltd.

2. CREDIT/DEBIT CARD

Please debit my: ☐ Amex ☐ Visa ☐ Visa Debit ☐ Mastercard ☐ Maestro (UK only)

Card No.

Start Date (Maestro only) Issue No. (Maestro only) Expiry Date

MM YY MM YY MM YY

Signature:

Date:

(I am over 18)

3. DIRECT DEBIT: To pay £24.99 per quarter by UK Direct Debit, please complete your details below:

PAYMENT DETAILS - DIRECT DEBIT
Instruction to your bank or building society to pay by Direct Debit.
For office use only: Originators Reference - 764 221



Name of Bank:

Address of Bank:

Postcode:

Name of Account Holder:

Sort Code:

Account No:

Instruction to your Bank or Building Society: Please pay Time Inc. (UK) Ltd Direct Debits from the account detailed on this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with Time Inc. (UK) Ltd and if so, details will be passed electronically to my Bank or Building Society.

Signature:

Date:

(I am over 18)

Offer open to new subscribers only. Final closing date for all orders is **March 28th 2016**. The full subscription rate is for 1 year (51 issues) and includes postage and packaging. If the magazine ordered changes frequency per annum, we will honour the number of issues paid for, not the term of the subscription. Direct Debit offer is available to UK subscribers only. Credit/debit card charges will be taken in sterling. This offer is subject to a minimum term of 12 months. Cancellations are not permitted until the end of this initial period and we will not issue you a refund. Should you wish to cancel after the minimum term, please contact our customer care team. For enquiries and overseas rates contact magazinesdirect@quadrantsubs.com or call +44 (0) 330 333 0233. **The digital version comes free with the print edition of your subscription and is available strictly on a trial basis. Time Inc. (UK) Ltd reserves the right to withdraw free access to the digital version at any time. The Rewards scheme is available for all active print subscribers of magazines published by Time Inc. (UK) Ltd, free of charge. Digital subscribers also get access as long as the subscription has been purchased directly through the publishers at magazinesdirect.com. Full terms and conditions are available at mymagazinerewards.co.uk. Time Inc. (UK) Ltd who publish Amateur Photographer, will collect your personal information to process your order. Time Inc. (UK) Ltd would like to contact you by post or telephone to promote and ask your opinion on our magazines and services. Please tick here if you prefer not to hear from Time Inc. (UK) Ltd ☐ Time Inc. (UK) Ltd may occasionally pass your details to carefully selected organisations so that they can contact you by telephone or post with regards to promoting and researching their products and services. Please tick here if you prefer not to be contacted ☐ Time Inc. (UK) Ltd would like to send messages to your mobile with offers from carefully selected organisations and brands, promoting and researching their products and services. If you want to receive messages please tick here ☐ Time Inc. (UK) Ltd would like to email you with offers from carefully selected organisations and brands, promoting and researching their products and services. If you want to receive these messages please tick here ☐

CODE 15W

GO DIGITAL!

Download your magazine right away.

Every subscription package includes access to the digital version for iPad and iPhone**



PLUS

ENJOY THESE FANTASTIC SUBSCRIPTION BENEFITS:

- Save up to 35% off the normal subscription rate
- Enjoy the luxury of home delivery
- Get exclusive Rewards for subscribers every month. Join Rewards at amateurphotographer.co.uk/rewards

Exclusive for subscribers

Rewards

Every month enjoy new **offers, giveaways** and **prizes**, included **FREE** with your subscription. With all of this, your subscription will pay for itself in no time. View all Rewards at amateurphotographer.co.uk/rewards



0330 333 4555

Quote code: 15W

7 days a week from 8am to 9pm (UK time)

SAVE ^{UP TO} 35%

when you subscribe today!*



That's just
£1.96
per issue

*per quarter by Direct Debit

THE DIRECT DEBIT GUARANTEE: This Guarantee is offered by all banks and building societies that accept instructions to pay Direct Debits. If there are any changes to the amount, date or frequency of your Direct Debit Time Inc. (UK) Ltd will notify you 10 working days in advance of your account being debited or as otherwise agreed. If you request Time Inc. (UK) Ltd to collect a payment, confirmation of the amount and date will be given to you at the time of the request. If an error is made in the payment of your Direct Debit, by Time Inc. (UK) Ltd or your bank or building society you are entitled to a full and immediate refund of the amount paid from your bank or building society. If you receive a refund you are not entitled to, you must pay it back when Time Inc. (UK) Ltd asks you to. You can cancel a Direct Debit at any time by simply contacting your bank or building society. Written confirmation may be required. Please also notify us.



Subscribe online at
amateurphotographersubs.co.uk/15W



Complete
the coupon
opposite

Print legacy

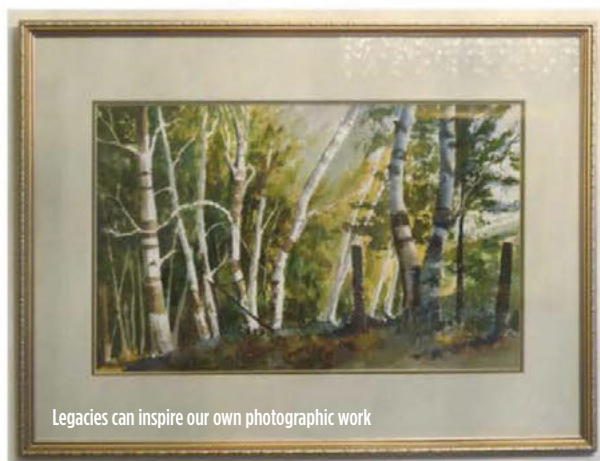
With an eye on the future and the probability of an all-digital legacy being lost forever, **Russ Barnes** reveals how he created a bound portfolio

I've read many articles over the last year that examined the risks of an all-digital legacy. The crux and central theme of these views are that, as photographers, if we create a purely digital portfolio then eventually it is at real risk of being lost – more so, it's pretty much guaranteed. All the backups in the world won't protect your photography if no one else knows how to view or access your images after you're gone. I've certainly sat up and paid attention to this sentiment – it all seems so utterly pointless if we create JPEGs that even our own family take little more than a passing interest in.

My father was a great watercolour artist who unfortunately died suddenly in 1990. My view of his artistic talent is not just a vague memory or romantic notion I have from childhood. Twenty-five years on, some of his pictures are on my walls and they are a constant reminder of his artistic work and impressions that are deep-rooted in me. I don't care whether anyone else agrees with my view of his skill or not, for me the evidence is there. One of my favourites, which I call 'Canadian Birches' (painted in 1967) is probably the reason why I'm compelled to photograph so many trees. So what am I creating for my children and others to remember me by? 'Not enough' is the simple answer – I want to leave behind something more than a couple of magazine covers and printed articles, nice as they are.

RELUCTANCE TO PRINT

But why the general reluctance to print? Have we fooled ourselves into believing that digital photography is somehow cheap, disposable or worthless? I do wonder



Legacies can inspire our own photographic work



Building a portfolio is a way of guaranteeing your images will live on after you

KIT LIST

PAPER

✓ Different papers produce vastly different results, so it's worth getting hold of sample packs before embarking on a print project and making a final choice.





PROTECTIVE SPRAY

■ Buying some protective spray for my prints proved to be invaluable. At £15 a can it might seem like another expense, but it ensures the print is shielded for handling.

MOUNTING SOLUTION

■ On my initial project I didn't get my mounting solution right. Eventually I bought Flex-Hinge Polyester Sheet Protectors, but they were expensive. Think carefully about your mounting product selection.



and have started to evaluate the excuses I've made for myself. I've convinced myself that part of the problem is available wall space – there's only so much real estate in my house for 80x60cm frames. I also feel narcissistic about printing and framing my own work for my own viewing, a feeling that I can't quite shed just yet.

So what's the answer? Well, other than getting your work professionally published, it's very simple – you have to take ownership and address this issue for yourself. I've begun to produce what I hope will be a series of printed portfolios while working on building towards exhibitions of framed work. So where to begin?

Above all I wanted a professional portfolio. My criteria was pretty strict and the benchmark would be high – a level of quality in the product that would reflect the craft, time and effort I put into my photography; a bespoke design that I would have some control over; a durable product, something to last maybe 50 years or more. And finally, I wanted something that would be visually strong with a timeless quality and lasting appeal, a tactile experience, but nothing that would leave my photography in the shade – a tricky balance to strike.

HANDMADE PHOTOBOOKS

Having got the bug for producing printed portfolios I looked at options to take things further and investigated the possibilities of hand-made book making. Part of my attraction to photography is the artistic craft involved in the process and with print in particular. I love the tangible aspect of a physical result. Printing is often seen as an add-on skill in photography, but to me it's an integral part of the image creation process. Hand-made books are just a further extension of that.

After excellent feedback from associates on Twitter, I booked myself onto master photographer John Blakemore's book-making workshop hoping to pick up the necessary skills needed to build my own volumes by hand. It was a wonderful weekend with perhaps the most interesting aspect focused on image sequencing and learning to tell a story with images. This is a highly recommended experience that has helped me look at my photography from a new angle.

I now have the skills to build any kind of book I wish from scratch, completely bespoke collections of work that fulfil my aim of producing something genuinely artistic and compelling to inspire others.





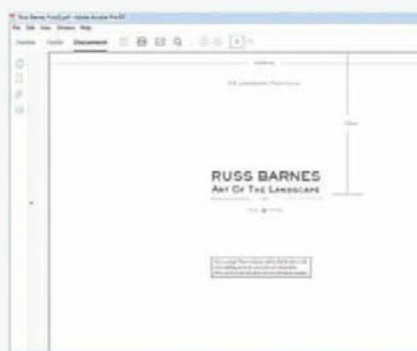
It took a lot of work, but the results were worth the effort

THINGS TO CONSIDER

I found there were a surprising number of choices available for photography portfolios; narrowing it down wasn't easy, mainly because in the beginning I didn't entirely know what I was looking for. I also made some mistakes by not thinking enough about how I would actually mount the images in the portfolio to construct the final product. Fortunately, through a degree of trial and error, I ended up with something I was exceptionally happy with. Though the journey wasn't without its pitfalls and frustrations.

The other thing to think about is whether to print your own images or outsource the process to one of a plethora of labs. In my view printing your own work is essential to appreciate fully the true craft of what, to many people, photography is all about – the final print.

Why do I mention all of this? Well it's simple really, planning is everything.



PERSONALISATION

If you decide to go 'all in' on a fully bespoke portfolio, one of the first choices you'll need to make is how you want to label and title the portfolio. Fortunately Hartnack & Co helped me a great deal and provided a very accurate proposal for sign off before production.



PORTFOLIO COLOURS

One of my objectives was to ensure that the look and feel of the portfolio had a touch of class without eclipsing my photography. I chose a steel-grey Buckram cloth and charcoal contrasting inserts to ensure that all the focus remained on my photography.

■ LEVEL OF EXCLUSIVITY

I knew that meeting my list of demands wasn't going to be cheap, and I wanted a level of exclusivity. I didn't want to walk into WHSmith and see the product on the shelf being bought by any number of art students for their coursework. I don't take short cuts with my photography and I wanted it to be displayed in the best possible way, so after a week of questions back and forth to various suppliers I narrowed my choice to a family business based in Devon (Hartnack & Company) who created a bespoke product for me.

From design to delivery, the whole process took three weeks and I then had the start of something that looked like it would earn its place between Kenna and Strand on my bookshelves. Most of all though, it met my criteria as the beginnings of a real print legacy – something for my children and grandchildren to cast their eyes over in years to come.

IMAGE SELECTION

Instinctively I knew that filling the portfolio was going to be the most substantial and difficult part of the project. It was important for me to have an outline high-level plan of what I really wanted to get out of it. Perhaps the most critical of all decision making was the image selection – it should go without saying that the prints are everything, the core focus of the whole project. Not only would they need to match the standard of the very high quality materials selected to house the work from a technical and presentation point of view, but also they would need to go beyond that and positively shine. The print needed to be king. I would be mortified if I got the impression that the slip case and binding outshone the contents, the final impression needed to be along the lines of, 'wonderful photography, oh and I love the case'.

It took about three evenings to get to a point where I thought I'd nailed the selection and sequencing. In the end a total of 40 images just felt right. The whole process was subject to a lot of reviewing and I changed the order a hundred times, deleted and added images, until I finally arrived at something I was happy with.

The flow was based on how textures, lines, patterns, colours, technique, atmosphere and even location played a part in trying to create a 'storyboard' of my photography. There's a degree of subtlety to the flow and of course it's based on my own decision making so some people might disagree with the order and final selections, but I also

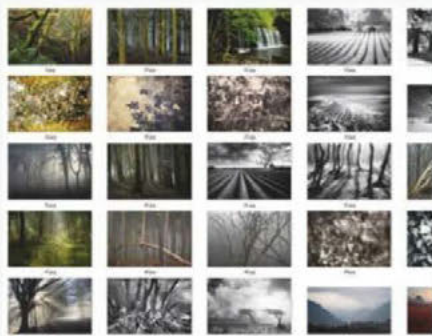


IMAGE SELECTION

It might sound obvious, but image selection is critical, as is the sequencing of photographs throughout the portfolio. I worked hard on ensuring that I selected photographs that were representative of my work without being too repetitive.



MOUNTING DECISIONS

I definitely didn't think enough about this at the outset. I decided late on that directly hole-punching my prints for a screw-post binding was a bad idea and then worried about how I could achieve it. Be very clear from the start how you will fix your prints into the portfolio.

THE KIT-BASED APPROACH TO CONSIDER

I found building my initial photography portfolio using bespoke options incredibly satisfying, but there's no doubt it wasn't the cheapest way of doing things. If you own a printer, there are a few suppliers who provide a more cost-effective kit-based approach to building a printed portfolio. So when I came to produce a further collection of images I chose the Hahnemühle FineArt Inkjet Leather Album.

The advantage of this set-up is that everything is designed and created to work perfectly together for a beautiful end product. I opted for a 12x12in red-stitched leather screw-post portfolio, they provide translucent page dividers and unusually you can buy it with double-sided inkjet paper to create the look and feel of a book, should you be so inclined. The paper is also already pre hole punched and scored, ready for assembly into the cover.

I must say that the end result was incredibly impressive and delivered a very professional overall impact while being more cost-effective than the bespoke approach. I will certainly be buying more of these to print my work.

If you want a very satisfying professional finish, kit-based systems won't disappoint



wanted to have a strong back-to-front series as well as front-to-back. To my eye I think I pulled it off – following the final print and construction I can honestly say I wouldn't change a thing.

After all the time and effort, it was finally there. It's genuinely something to be proud of and it certainly met my vision and objectives.



VOLUME

A decision on the number of prints featured was important. Too few and it would be a bit light, while too many would be overwhelming. I settled on 40 for my first project and used 30 in my second. Don't underestimate the physical weight of printed work either.

High-quality mono
prints at home are
easily within reach



Perfect prints at home

Nothing beats the tactile quality of a print.

Tim Coleman explains how to get the best out of your printer

These days, a photograph can be viewed directly on a television, a computer monitor, a tablet device or even a lightbox, but for many people there is still nothing like producing a print.

Before digital technology, black & white printing was achieved by hand in the darkroom on dedicated black & white paper. In the early days of digital photography, the quality of home digital black & white printing left much to be desired, with photographic labs producing the best results.

Yet home printing has improved in the past few years, and there have been some significant developments for black & white printmakers. With a variety of options for printing at home, we look at the options.

IMPROVEMENTS TO PRINTING FROM HOME

Most home photo printers have a single black-ink system, and use one of two methods to create a black & white print. One method is to mix the cyan, magenta and yellow inks (CMY) in equal measures to provide a black & white result. However, it is difficult to remove colour variants in all tones when using this type of system. Alternatively, using just the black ink eliminates colour casts and gives a neutral grey result, but the range of tones cannot match those from a CMY print and the reproduction is often grainy.

Black & white printing was revolutionised through the introduction of quad blacks – an inkset containing four cartridges of ‘shades’ of black rather than CMYK (cyan, magenta, yellow and black). This system improved the tonal range of prints no end, although its set-up is impractical for those who print in both colour and black & white.

In 2005, Epson introduced its K3 eight-ink system, the first of its kind to use both colour inks and multiple black inks that offered the best of both the colour and black & white worlds. This new system rendered quad blacks redundant. Other manufacturers have introduced multi-black ink systems, too, which are used in today’s more expensive A3+ and larger printers, while the smaller units and less expensive A3 printers still use the single black set-up.

HOME PRINTING COSTS

I USE an average of four sheets of paper (which includes dividing a sheet into smaller sections to save paper) to get a print just how I want it. Printing black & white images is more demanding on the black cartridges than it is on the colour cartridges, so it is worth keeping a stock of these. Expect an 11ml black cartridge to run out after 25 A3+ black & white prints, but this varies depending on the prints being made and the printer being used.

- A3+ printer recommended for black & white printing: around £650
- Full set of proprietary inks: £200 (£20 per 11ml cartridge)
- Baryta paper: £26 for 20 A3+ sheets
- A2 printer recommended for black & white printing: from £1,100
- Full set of proprietary inks: £500 (£40 per 30ml cartridge)
- Baryta paper: £40 for 20 A2 sheets
- Continuous flow system with full set of inks (125ml in each colour): £250
- Replacement ink bottles: £30 for 125ml

Producing a good-quality print is not solely down to the printer, though. Paper for home printers has also improved, with a wide variety of surfaces for different finishes, which we’ll look into in more detail a little later.

PHOTO AND MATT BLACK INK

Most of today’s top black & white home-print systems use pigment ink. However, black ink is optimised for the type of paper, with ‘photo black’ (dye ink) the best for glossy paper and ‘matt black’ (pigment ink) for matt paper. Some printers have only one slot for the two cartridges, so switching between gloss and matt prints requires the cartridges to be changed, too, which can take time and waste ink. If you are likely to use both gloss and matt paper, consider buying a printer with a separate slot for each.

SEAL OF QUALITY

There are ways to ‘authenticate’ an inkjet print that is created at home using the services of companies such as Epson, Hahnemühle and Harman. Those who have an Epson Stylus Pro printer, Epson inks and Epson certified paper can take advantage of Epson’s Digigraphie service (www.digigraphie.com), whereby the user can sign the Artist Charter and receive a personalised embosser to mark and authenticate their prints. There are four officially recognised Digigraphie labs in the UK.



PAPER TYPES

When you have an image printed at a lab, the technical team can talk you through what paper would be most suitable for the results you want. When it comes to printing at home, there is also a wide choice of paper types to select from. There is no overall 'best' paper to use, though, because each image suits a different finish. Papers vary in their density, weight, finish, warmth, saturation, dynamic range and maximum black density.

Glossy paper provides high saturation, contrast and dynamic range, so prints have real punch to them. However, glossy paper is usually less dense than a heavyweight matt paper and can feel rather insubstantial. Its reflectance, too, can hinder viewing the print clearly in certain lighting or when it's behind glass.

Matt paper has a noticeable texture on the surface, it



There are a wide variety of paper types and styles to choose from

seldom suffers from reflections and is weighty in the hand. Also, the dynamic range is not as wide as glossy paper. Images do not have as much punch and are less sharp generally, but subtle tones are displayed well. Specialist papers such as photo rag and canvas demonstrate the attributes of matt paper.

Semi-gloss paper, on the other hand, which is also known as pearl or luster depending on the manufacturer, is a popular choice because it offers elements of both gloss and matt paper. The smooth surface has less shine than gloss, but it still retains some of the punch.

Finally, baryta paper is claimed to be the inkjet paper that most closely matches darkroom paper.

True baryta includes a barium sulphate layer beneath the ink-receiving layer, giving the authentic smell and feel of traditional darkroom paper.

It is important to read the label or check with the manufacturer, though, as some papers have a 'baryta effect' and do not include the baryta layer. The weightiness of most baryta papers makes them feel the part, too.

INKJET WORKFLOW

It is vital to prepare an image and process it correctly to get the best results. Although most printers offer basic tone adjustments in the print process, it is best to make these adjustments using editing software beforehand. First, ensure the monitor is correctly calibrated using a calibration device (visit www.colorconfidence.com or www.datacolor.com). The main adjustments for black & white printing are to the shadow and highlight tonality. Basic changes to exposure, levels and contrast are easy to make using editing tools such as Photoshop or Nik Software's Silver Efex Pro 2, which is a plug-in specifically designed to recreate the classic look of black & white film for digital photographers. Scans should

be made with a flat tone to preserve as much information as possible, then they should be edited for contrast, levels and exposure. Finally, look at the image size. There is no point exceeding the printer's resolution, which will be either 300dpi or 360dpi. Whichever it is, select this resolution as dpi in Image Size.

PRINT PROCESS

Processing a print correctly is a vital part of producing a great black & white print. The following are some of the key points to consider before clicking the OK button.

STEP 1 Manage colours

Letting the printer manage the colours is a useful option for those who use the same brand of printer, paper and inks. If the

printer manages the colours, select the black & white mode (or, in the case of Epson, the Advanced Black & White Mode). With this mode selected, the use of the colour inks is dramatically reduced, although they are still used to prevent grain in the final print. With a black & white mode selected in the print settings, most printers offer a choice of colour toning to achieve warm or cool results.

Selecting the software to manage colours is best when the printer, paper and ink are all different brands. In this option, ICC profiles are used to ensure the correct output of ink. Most paper manufacturers offer basic ICC profiles for a number of printers and their own paper, or a custom profile service specific to your own printer can be made by sending prints made with that printer to the paper manufacturer.

STEP 2 Select correct paper type

Whether using an ICC profile or a black & white mode, the second phase of the print menu requires the correct paper type to be selected, to ensure the printer head delivers the optimal quantity of ink. The paper types are generic and not specific to the paper manufacturer, with options including gloss, matt and semi-gloss.

STEP 3 Print speed and print quality

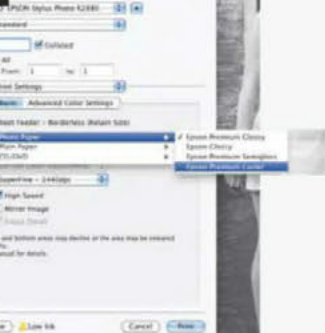
Setting the print speed to low ensures that the finest level of detail is reproduced, without any print lines in the final result. For Epson printers, this is achieved by 'unticking' the High Speed box. Print quality should be set to the highest setting possible. These combined factors will slow down the print speed.

STEP 1



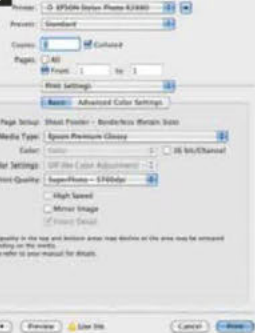
Choose Photoshop Manages Colors for Color Handling

STEP 2



Select the correct paper type

STEP 3

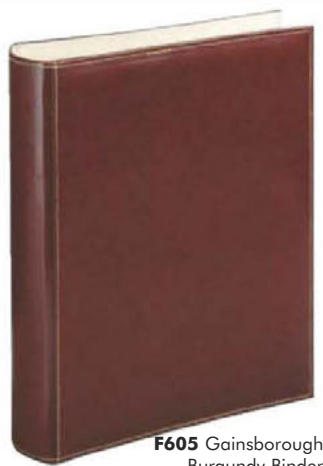


Double-check your settings

FOR THE 'REAL' PHOTOGRAPHER

CLAIM A LEATHER ARCHIVAL BINDER ALBUM

FREE!



F605 Gainsborough
Burgundy Binder

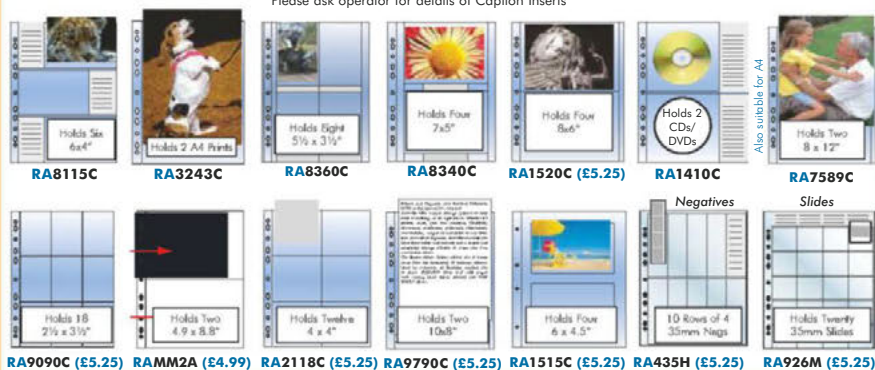


KDF605 Binder
Album Set £65.85

1 PACK (10 SLEEVES) FROM ONLY £4.75 (see website for volume discounts)
CHOOSE YOUR ARROWFILE CRYSTAL CLEAR POCKET REFILL SLEEVES FROM BELOW



Please ask operator for details of Caption Inserts



Album Size: 338mm H x 286mm W x 70mm D. Capacity: up to 70 clear Refill Pages per album

Terms & Conditions: *Please note normal P&P applies £5.95 | Offer limited to one album per household | For overseas orders and non-mainland UK delivery please ring +44(0)1904 202150

This Multi-Purpose Archival Binder Organiser, where you choose the Pocket Refill Sleeves, can be yours **ABSOLUTELY FREE** - just order any refills for £25 or more. Even better - order any refill sleeves for £50 or more and Claim a Double Album Set **FREE***. Quote: **APA0316** and add FREE items to your basket online.

Arrowfile offers unique storage systems to help keep everything...in its right place. Whether it's photos, cards, your own creations, CD/DVDs, Documents, Certificates, Postcards, Collectables, Memorabilia, Negatives and Slides or any other item you wish to organise, Arrowfile can help you store them safely and securely into a simple and adaptable storage solution to make your own memorable album.

Our Binder Album System allows you to break away from the limitations of ordinary albums. Used by museums, its flexibility enables you to place **ACID-FREE** loose leaf refill pages with varying sized slip-in pockets into **ONE SINGLE** album.

SHOP ONLINE - WWW.ARROWFILE.COM/PHOTO50 ADD **APA0316** in the promo code box
ORDER HOTLINE - 0844 855 2060 Please quote Special Offer code: **APA0316**



PROTECT, ORGANISE AND DISPLAY

ARCHIVAL STORAGE AND PRESENTATION SOLUTIONS FOR ALL YOUR NEEDS



Suppliers to photographers, photographic and family history societies, schools, medical establishments, museums, businesses, as well as collectors, hobbyists and musicians.



Binder Albums with slipcases including Family History



Portfolios Ring Binders, Presenters, Cases & Archival Refill Sleeves



Archival Storage Boxes, Binder Files PLUS Indexing and Dividers



Digital Photo Slip-In Albums - 6x4", 6x4.5", 7x5", 8x6" & more -



Traditional Photoboard including Wedding Themed Albums



Pocket Refill Sleeves - Slides, Docs, Postcards, Photos, Stamps etc.



Stamp and Coin Storage - Binders, Sheets, Cases, Drawers



Photo Frames - Wood, Plastic and more!



Display Presentation Stands, Steps, Plates and Showcases



Display Presentation Cabinets and Cases



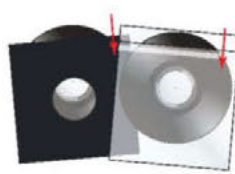
Viewing and Scanning Equipment



Photographic Accessories including Negative bags



CD/DVD Organisers, Zipper Wallets and Portfolios



Protective Sleeves and Covers for 7", 10" & 12" Vinyl Records



Vinyl Record Storage Cases



Digital Converters & Players for Records

Visit Our Online shop and **CLAIM 10% OFF** any orders placed by 30 Apr 2016 - **Use Code: APADIS16**

† Cannot be used with the above offer



SciFi Fashion Shoot

Hasselblad H5-50D,
80mm/2.8 at f16.
2 x Broncolor Strip Lights.
1 x 6ft fluorescent tube.

Filter used:
0.9 ND ProGlass

As images go, this was one of the more complex ones. I wanted to capture this in one shot and to do so required a fluorescent light tube swirling around the model on an 11 second exposure combined with a burst of flash from my studio lights to illuminate the model correctly.

I'd determined an exposure of f16 for the flash but the fluorescent tube was too bright, so I applied a LEE 0.9 ND ProGlass filter (3 stops) for part of the exposure and then fired the flash immediately after an assistant switched off the fluorescent tube. The model held her pose still and the result hopefully speaks for itself. Once again LEE Filters were an important part of the success of this image.

Watch the video of the shoot and technique here:

www.karltaylorportfolio.com/film-video



Karl Taylor

Karl Taylor
www.karltaylor.co.uk



INSPIRING PROFESSIONALS
www.leefilters.com

